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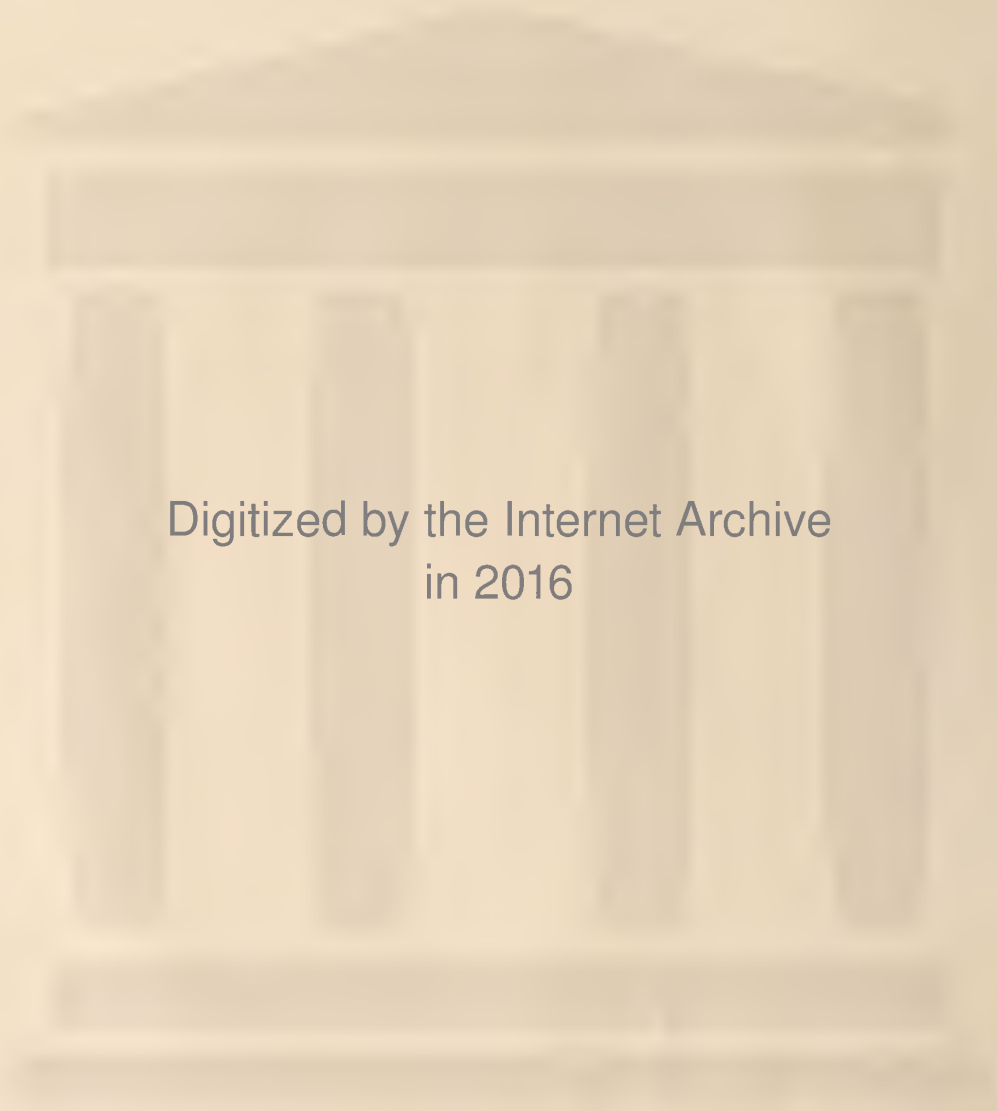


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The JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

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FIRST TO EMPLOY ETHER FOR SURGICAL ANESTHESIA
See Editorial Page 1

Volume 40 JANUARY, 1947 Number 1

PUBLISHED MONTHLY AT OKLAHOMA CITY, OKLAHOMA UNDER DIRECTION OF THE COUNCIL



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Many patients suffering from persistent pain are subject to attacks of depression characterized by deep apathy and emotional exhaustion. Thus, pre-existing neurotic tendencies may be exaggerated and the pain threshold progressively lowered.

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THE JOURNAL
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EDITORIALS

EONS OF PAIN — A CENTURY OF LETHE

Victo Dolore

When Sir James Y. Simpson, who first used chloroform in obstetrics, was made a baron in 1866 he placed the above words on his coat-of-arms. Translated into English these words mean *victory over pain.*

Recently medical historians celebrated the centennial of the first public demonstration of surgical anesthesia. It was on October 16, 1846, when William Thomas Green Morton through the administration of ether rendered a patient unconscious and insensitive to pain at the Massachusetts General Hospital while John Collins Warren performed a surgical operation.

To Crawford W. Long of Jefferson, Georgia, belongs the credit of first employing ether for surgical anesthesia. On March 30, 1842, he administered ether for the removal of a tumor from the neck of James M. Venable. The recognition and honor so well deserved by Crawford W. Long was forfeited by the fact that his was not a public demonstration and that he unduly delayed publication of this remarkable feat. The contraversy between Wells, Jackson and Morton and the long delayed recognition of Long is well known. This controversy, yet unsettled, was most unfortunate. The best we can do is to accept Oliver Wendell Holmes' verdict — "To E(i)ther".

The first ether anesthesia in Europe was for the extraction of a tooth in the home of Francis Boott on Gower Street in London. Boott had been notified by Jacob Bigelow, professor of material medica at Harvard Medical School. In turn Boott informed the great surgeon, Liston, who on December 21, 1846, performed an amputation of the thigh while the patient was under this marvelous vapor. In a letter to Francis Boott he said, "It is a very great matter to be able thus to destroy sensibility. . . ."

A great wonder had come to pass. The patient did not feel the amputation but Liston, operating because of a discharging sinus from an injured tibia, knowing nothing of the danger, infected the stump and the patient died of septicemia. The student Joseph Lister witnessed this operation and was permitted to see "victory over pain" and to witness the course of infection over which one day he would stand victorious.

The news of ether anesthesia swept continental Europe like a whirlwind. It was no longer necessary to do a major amputation "while a colleague was taking a pinch of snuff". Speed was not so essential when pain no longer racked the body.

Samuel Guthrie of Sacketts Harbour, New York, discovered a method of preparing an alcoholic solution of chloric ether (chloroform) and wrote to Benjamin Silleman of Yale University about its stimulating qualities. It was suggested that it might be of use in medicine. Almost simultaneously chloroform was discovered in France and Germany. Guthrie had failed to date his letter and when the anesthetic value of chloroform was demonstrated controversy as to priority arose as in the case of ether. Though Guthrie deserves the credit of being the first to prepare chloroform and though he recognized its stimulating qualities he missed the glory of demonstrating and announcing its anesthetic virtues. In spite of his chemical sagacity, he saw his own daughter fall into a "sweet sleep" through accidental inhalation of chloroform in his laboratory without sensing its remarkable possibilities.

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After James Y. Simpson proved its anesthetic virtue and popularized its use in obstetrics Guthrie with "no happiness (and) without a home" pathetically wrote as follows. "You see it called chloroform and the newspapers are beginning to give me credit for discovering it. I made the first particle that was ever made. . . ."

Thus America can claim credit for anesthesia, the greatest boon that has come to mankind. Wherever the knife is used, wherever babies are born, wherever bones are set and wounds are attended, the spirits of Long and Guthrie are hovering in the ether.

A HOUSE NOT BUILT UPON SAND

It is impossible to observe the operations of the American Medical Association as revealed in the House of Delegates without being impressed with the importance and the magnitude of this great organization. It is interesting to note with what serious vein the delegates go about their business, yet one is reminded of the two theatrical masks as he observes the change of countenance on the faces of the delegates as the business before the House shifts in character and importance. Often the smile and the scowl are observed flitting across the same fine face, each yielding to the other as occasion demands. This was particularly true while resolutions were being presented in rapid succession.

An incomparable body of great men busy about the health of the nation. While burdened with such grave responsibilities it is fortunate that they can cast aside the scowling mask for the saving sense of humor. Thus, only, can level vision be focused upon the tasks at hand and the problems to come.

The delegates need the multiple eyes of Argus and as many ears; they should have the reasoning of Socrates and the wisdom of Solomon; the fire of Mount Sinai and the savor of the Sermon on the Mount.

THE CAMPAIGN

In the December issue of the Journal the leading editorial was on Giving. In another section of this issue you will find a statement explaining the Oklahoma Medical Research Foundation and the campaign to raise three million dollars.

Every worthy physician in the State will want a part in the building of this Foundation. According to the editorial on Giving it does not take a fortune to be a generous giver. With this in mind, every physician should contribute.

In the old world the mills of the gods have been shut down by war. The channels through which scientific grist flowed have been choked. Research workers and the tools of research have been destroyed. The United States must salvage what is left, recast the plans and supply the tools. Our opportunity is at hand. We must provide ways and means for our native talent. With the courage and the pertinacity of the apostle Paul let us "lay hold upon the hope set before us". There may be a Banting or a Best below the Canadian border. Why not in the middle west.

We must help bring to Oklahoma a new era. If we do our best history will date it and perhaps mark it. We should make sure that our grandchildren find our names among the original subscribers. They may need the inspiration it would provide.

TRENDS TOWARD SOCIALIZATION DANGEROUS

The New Deal, on the verge of ruin, cannot afford the risk of compulsory health insurance which in plain English is socialized medicine. Before going too far the United States might well take warning from present conditions in Great Britain. The Labor Party now in power cannot satisfactorily manage its labor troubles, let alone medical service and other agencies growing out of socialistic policies. Some of these trends are discussed in the October 21 Newsweek. Coal miners refuse to stay on the job now that their wages compare with those of workers in more privileged occupations, the situation being aggravated by sufficient money to purchase necessities and luxuries not available, including food. When accorded a special ration of meat, other hungry groups make embarrassing demands upon the hard pressed government.

Under the title "Revolte in Olde England" the Newsweek deals with the British government's housing projects designed to decentralize London by confiscating land and transforming "quaint sleepy villages" into modern towns of fifty to sixty thousand people. All this is indicative of mounting unrest and open revolt against government planning which usurps the individual and community rights.

SCIENTIFIC ARTICLES

THE ELECTROENCEPHALOGRAPH AS AN AID IN NEURO-PSYCHIATRIC DIAGNOSIS*

CHARLES LEONARD, M.D.
OKLAHOMA CITY, OKLAHOMA

In 1874 Caton discovered evidence of electrical activity in the brains of living animals; he also observed electrical fluctuations from the cortex of animals and postulated that these fluctuations were related to the functional activity of the brain.

In 1892 Beck showed that local damage to the cortex modified its electrical activity. Gotch and Horsley, in the same year, reported that special cortical areas gave an electrical response to certain types of peripheral stimulation.

Various investigators added greatly to the knowledge of electrical brain potential and in 1925 Reminski, who had also been working with a string galvanometer, published a report describing the electrical activity of the cortex in much the same way as we understand it today. He stated that there is a spontaneous fluctuation in potential with a frequency of 10-15 per second and a faster fluctuation of 20-32 per second.

Hans Berger worked with brain potentials as early as 1902, and in 1924 he successfully recorded the electrical activity of the human brain. In 1934 he demonstrated that the human brain has an electrical beat and that the beat comes from the neurons and changes with age, with sensory stimulation and with various changes in the physico-chemical state of the body. His observations, that the electroencephalogram comes from the cortex and is related to psychic activity, has been reaffirmed on numerous occasions by later workers.

The most evident aspect of the electrical activity of the cortex is its beat or rhythm. Under normal conditions the recorded beat responds to stimuli; such as illumination of the retina with a decrease in amplitude and increase in frequency. Also any physico-chemical disturbance of the cells alters the character of the recorded wave.

From a study of these various wave phenomena, electroencephalography is now being applied as an aid in neuro-psychiatric diagnosis, especially in helping to differentiate various types of epilepsy, as well as in the detection of local damage in the cerebral cortex.

The technique of electroencephalography is similar to that of electro cardiography, except that greater sensitivity has to be obtained by means of audio amplifiers and more rugged recording units. The electrodes are small plates that are held to the intact scalp with some adhesive material. Machines are made to run from one to eight leads at a time. For a more accurate diagnosis one should have two or more leads running at the same time for comparison.

For most routine checks the electrodes are placed bi-forntal, bi-parietal, bi-temporal and bi-occipital, and the ear lobe is used as the indifferent electrode. The dominant rhythm is 8 to 13 waves per second and 10-100 microvolts, and is known as alpha rhythm.

The machines are usually standarized at 50 microvolts before tape is run so that the voltage of the wave can be measured. The speed of the tape is usually 2½ or 3 c. per second.

Waves of from 8 to 12 per second are considered normal, slow, and very slow rhythms are border line abnormals. Psychomotor activity, petit-mal and petit-mal variant are definitely abnormal rhythms and are found at the other extreme of the spectrum. Fast and very fast waves are border line abnormals and spike and grand mal rhythm are

*Delivered before Section on Neurology, Psychiatry and Endocrinology, Oklahoma State Medical Association Annual Meeting, May 1, 1946.

pathological. The amplitude of the wave is of diagnostic value, especially if there is an amplitude asymmetery in one or more leads.

The age of the patient is important in reading the EEG. At birth, rhythmic brain waves are absent, but within the first few weeks a slow rhythm develops, which gradually approaches the adult pattern which is obtained about the twelfth year.

The EEG studies on known epileptics reveal that not all epileptics show the abnormal rhythm seen in seizure states. It has been shown that a significant proportion of epileptics have normal EEG in their inter-seizure periods. However, a large proportion of these may show seizure discharges upon hyperventilation. The seizure rhythm shows at either the slow or fast end of the spectrum. The type of rhythm is helpful in diagnosing the type of epilepsy as well as indicating the best pharmacological treatment.

Grinker states that, "Electroencephalograhpic studies of relatives of epileptic patients reveal cerebral dysrythmias in a large proportion. It is believed that the cerebral dysrythmia is apparently inherited and constitutional for the same type of dysrythmia can be demonstrated in twins and non-epileptics in the same family."

Great care must be used in interpreting the EEG, so that artifacts and age variation are not diagnosed as epilepsy. In normal young childen high voltage, slow plateaus and even spike discharges, suggestive of epilepsy may be observed.

At times drowsiness or sleep cause high voltage slow waves to appear. The typical dysrythmias found in epilepsy may at times be produced by gen paresis, tumors, infections, or other organic brain diseases.

In petit-mal epilepsy, the characteristic wave is a cusp and spike which occur at the speed of about 3 per second. Associated with this is usually a slow normal or border line slow, abnormal rhythm.

In grand-mal epilepsy there is also a slow, high voltage wave series with frequent isolated areas of fast spike waves. When the attack occurs, there is a burst of fast spikes during the tonic phase, followed by large, slow waves in the clonic phase, which changes to a flat, slow, low voltage wave during the stupor.

Psychomotor Epilepsy is characterized by large, slow, rather flat waves of high voltage that do not show quite so much of the spike phenomena.

The epileptic dysrythmias, at times, are seen in patients who are not showing clinical seizures, and their sub clinical attacks are usually many times more frequent than those that break through. However, it is also evident that a number of cases of clinical epilepsy do not show the epileptic dysrythmias during the inter seizure period.

In a certain number of migraine cases, as well as other headache and vertigo states, seizure discharges are seen on the EEG and usually respond well to dilantin or phenobarbital therapy. Grinker states that "the close relation of migraine to epilepsy is more than a clinical impression and has been statistically proven, but since both affections are ill-defined, are both symptomatic and idiopathic, their statistics have a limited value. In their periodicity of attacks, intervals of well-being, and other similarities, there is good reason to consider migraine and epilepsy as clinical manifestations of a fundamentally obscure disorder.

In Jacksonian epilepsy the EEG makes possible the localization of the attack. Lately the electroencephalogram has been used in cases of early eclampsia, to anticipate convulsive seizures in their patients and so far the results have been rather favorable.

Birth injuries, diffuse cerebral arteriosclerosis, Schilders disease, etc, show abnormally slow waves over the involved area. Sydenhams chorea with cortical involvement may show 2-3 per second waves in all leads. In cases of intracranial hemorrhage it is usual to find abnormally slow waves and occasionally even seizure discharges are seen. Berger reported that the electroencephalogram, in two severe cases of Korsakoff's psychosis, showed many 5-7 per second waves.

However, there are numerous cases of severe organic brain disease, that show little or no abnormal waves. There have been cases of Picks and Alzheimiers disease, confirmed at autopsy, with severe brain atrophy, that showed a normal EEG during life.

Many patients with multiple sclerosis and evidence of cortical involvement may show scattered slow waves, 6 to 8 per second, but many severe cases of this disease have no electroencephalographic evidence of disorder.

The maniac depressive psychosis, psychoneurosis and schizophrenia show either normal or questionably normal records. Although some investigators are of the opinion that some personality disorders show characteristic waves, this work has not been substantiated, and is denied by other. However,

work done by Gallagher and Gibbs on psychosis, behavior disorders and personality types, indicate that some sort of rough correlation can be made with the EEG. Children with behavior disorders have an excessive amount of 3 to 6 per second activity and show an irregular or choppy curve.

"Kalinowsky and Hoch, in their new book on shock therapy, state that following Metrazol injections, small 6 per second waves over the entire cortex were observed. When the convulsions follow, there is a sudden increase in size and decrease in frequency in the frontal region.

"The electrically induced, generalized convulsions are immediately followed by slow waves of .5 to 2 per second, which are equal over the entire cortex when breathing starts a 2-4 cycle wave predominatic A relatively normal rhythm is established within 30 minutes, folowing electric treatment."

There has been much controversy as to how much permanent damage is done to the brain by electro-shock therapy. Gibbs is of the opinion that the abnormal waves induced by electro-shock do not entirely disappear, and abnormal rhythms have been noted several years following shock treatment. For this reason it is apparent that the cases for electro-shock should be carefully chosen, and that treatments should be given only by trained personnel.

At present work is being done to try to determined by pre-treatment EEG the type of patient most likely to respond to electro-shock therapy.

Electroencephalography has recently reached the stage in its development where it is useful in the diagnosis of certain cerebral tumors. The crebral cortex in the neighborhood of a tumor gives rise to slow alterations in electrical potential, ranging from 1 in 2 seconds, to 2 per second. Such slow waves are only of value in localizing a tumor when the area from which they can be recorded is localized. As similar slow delta rhythm can be obtained from all parts of the head during sleep.

Grinker states that, "care must always be exercised in interpreting the electroencephalogram. It may be entirely normal even though a brain tumor is present. Whenever a sharply localized focus of delta waves can be repeatedly demonstrated, there is a strong indication that an expanding intracranial lesion lies in the neighborhood of that focus. The clinician should not be content until that suspecion is confirmed or very definitely disproved. On the other hand, such waves, which are indefinite, inconstant, or diffuse, do not have nearly as great an implication. The procedure cannot be considered as a substitute for a careful clinical investigation or for pneumoencephalography."

A variety of artifacts make interpretation of the electroencephalogram difficult. However, with experience, most artifacts can be avoided or rendered harmless by identification. Eye movements, blinks, and sweating give rise to slow high voltage potentials, which are easily mis-diagnosed.

In nervous patients who do not cooperate too well, it is frequently noted that the clamping of the jaw causes a fast spike wave of 30 per second which is due to muscle potential.

At times the electrocardiograph will be seen intermingled with the EEG. Condenser-like discharges at times, simulated psychomotor epilepsy.

SUMMARY

This paper has been presented in an attempt to bring together the latest knowledge of the EEG as a diagnostic aid. While great improvements are being made in the machines, and numerous investigators are trying to correlate their findings in EEG tracings with different neuro-psychiatric conditions. At the present time the machine has its greatest value in the epilepsies, head injuries, and localization of brain tumors.

Saul and the Davises have done a lot of investigating in correlating EEG with personality disorders, but as yet they have not been generally accepted.

The EEG should be used as another laboratory procedure, as an aid to diagnosis and not to make the diagnosis at the expense of a thorough clinical examination.

In evaluating the EEG, a positive evidence of abnormal brain waves is of great aid in evaluating the patient's condition, but a negative EEG does not rule out the existence of organic pathology.

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DISCUSSION

JESS D. HERRMANN, M.D.

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It is only recently that an electroencephalograph has been available for our use, and as a result, our personal experience in its use as an aid to diagnosis has been limited. As the essayist has stated, electroencephalographic studies seem most valuable in the epilepsies, head injuries, and in the localization of brain tumors.

Its use in the convulsive disorders seems of particular value. If the outbursts of cortical dysrythmias arise from one local area in the cortex, then local excision of this area may be the treatment of choice. On the other hand, if multiple areas are found in the cortex giving rise to such abnormal waves, then the removal of a local area would not offer such a good prognosis, even though gross pathological changes could be demonstrated at this area.

We are all aware of the extreme value of a careful clinical history and neurological examination. Too often in such conditions, the neurological examination gives no positive aid. Infrequently is the examiner so fortunate as to observe an attack and too often members of the family are too emotionally upset at the time to observe accurately and be able to relate later the sequence of events during a seizure. The pneumoencephalogram is often normal in such cases, in that there are frequently no gross anatomoical or pathological changes. We, therefore, see how valuable the electroencephalogram can be in aiding to differentiate the epilepsies from other conditions that may simulate them in the patient that apears with a history of having had "attacks".

To the neurosurgeon, the localization of brain tumors is most necessary, and any means to aid in accomplishing this is welcomed. Admittedly, the electroencephalograph has its limitations in this respect, as many tumors are deep-seated and do not alter cortical activity. It is of particular value, however, in localizing lesions in the more silent areas of the brain where the cortex has been involved.

The electroencephalograph to me is another means by which a more accurate neurological diagnosis can be reached, and can be used to advantage along with other diagnostic aids.

SYMPATHETIC OPHTHALMITIS*

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Duke Elder states, "Sympathetic Ophthalmitis is a specific bilateral inflammation of the entire uveal tract of unknown etiology, characterized clinically by an insidious onset, a progressive course with exacerbation and usually a disastrous termination, and pathologically by a nodular or diffuse infiltration of the uveal tract with lymphocytes and epitheloid cells, which almost invariably follows a perforating wound involving uveal tissue. The disease appears in the injured eye (or exciting eye) at a variable time after injury and synchronously or shortly afterwards affects the other (or sympathizing) eye; but the clinical and pathological picture presented by the two eyes is identical."

HISTORICAL

The concept of sympathetic inflammation is one of very considerable antiquity, but the history of the disease really commences with the masterly and comprehensive description of Machenzie (1835) who called the disease sympathetic ophthalmia. Wardrop (1819) had already drawn attention to the fact that veterinary surgeons had been in the habit of destroying the injured eye of a horse with lime or a nail in order to save the good one, but Prichard (1851) was the first to practice excision as a therapeutic measure. Twelve years later at the first Heidelberg

*Presented before the Section on Eye, Ear, Nose and Throat of the Oklahoma State Medical Association at the Annual Meeting, May 3, 1946.

Congress, Critchett (1863) showed that excision was ineffective once the inflammation had broken out, and thus regularized prophylactic excision as it is practiced today. The next incidents of importance in the history of our knowledge of the disease were the critical survey and experiments of Schirmer (1900) and the classical histological studies of Fuchs (1905) who demonstrated that it was a separate disease — entirely distinct from any other affecting the eye; since their time the literature has been full of attempts to determine the etiology of this condition — a problem so baffling that our ideas upon it today are no more ordered than they were then.

INCIDENCE

It is a relatively rare disease, and owing to the improvements in the surgical technique of the treatment of wounds is undoubtedly becoming rarer.

More males are affected perhaps because of their greater exposure to injury.

It has been held that the young are especially suspectible, but statistics correspond very closely to the average age distribution of the general population. It is quite certain that no age is immune.

PREDISPOSING CAUSES

In practically all cases there is penetrating injury of the eyeball. In fact, it is thought that sympathetic inflammation does not arise without rupture of the globe; however, the rupture may be subjunctival. Perera states that 1.6 per cent of cases of sympathetic ophthalmia result from subconjunctival rupture.

Suppuration in the injured eye is rarely followed by sympathetic disease.

The most common exciting condition is that of a sub-acute inflammation in the soft shrunken eye in which delayed or incomplete healing of the wound is present.

Statistics in the literature show that about two per cent of perforating wounds result in sympathetic ophthalmitis.

It is interesting and says much for advances in surgery that while sympathetic ophthalmitis was very common in the American Civil War (16 per cent) and in the Franco-German War (50 to 56 per cent) and was still relatively common (five per cent) in the Russo-Japanese War, such cases were rare during World War I.

The interval between injury and the onset of inflammation varies from nine days to 50 years as reported in the literature; however, cases occur exceptionally before an interval of two weeks, 65 per cent occur occur before an interval of two months, 80 per cent before an interval of three months and 90 per cent before the lapse of a year. The most dangerous time is from the fourth to the eighth week. It follows that the chances of its development after three months are few, but the possibility of its incidence exists indefinitely.

ETIOLOGICAL THEORIES

Despite researches extending over a hundred years, the pathogenesis of sympathetic ophthalmitis is unknown, but of the many theories which have been put forward only two remain outstanding: the infective theory and the allergic theory.

INFECTIVE THEORY

The clinical behavior and pathological appearance of the disease strongly suggests an infective origin, but no bacteriological confirmation has resulted from innumerable researches. The hypothetical organism, its route of entrance into the exciting eye, and its method of attacking the sympathizing eye are alike unknown.

Today two suggestions occupy the center of the stage; one, that the disease is a tuberculous manifestation, and the other that it is a virus infection.

THE TUBERCLE BACILLUS

The granulomatous nature of the inflammation and its general resemblance to tuberculosis have led many authors to believe that sympathetic ophthalmitis is a tuberculous manifestation. The demonstration by Lowenstein (1931), however, of the frequency of a systematically innocuous tuberculo-bacillemia, of its occurrence in the blood in cases of sympathetic ophthalmitis (Meller, 1933-34) and, finally, the demonstration of the bacilli in the eye in such a case (Meller, 1936), added strong arguments to this view; but these findings have so far lacked general confirmation. Koch's postulates have not yet been fulfilled.

A virus infection is suggested by the failure of bacteriology to discover a causal organism. At present there is no proof that it is due to a cirus.

THE ALLERGIC THEORY

This is pased on the fact that the uveal pigment is organ specific instead of species specific. It assumes that an injury to the uveal pigment of one eye sensitizes the organism to uveal pigment, so that the other eye, which is the only place where such pigment exists, becomes the seat of an allergic

reaction. There are a number of important objections to this theory.

Probably it is due to infection by an exogenous virus perhaps inhabitating the conjunctival sac, that eventually becomes systemic but excites no symptoms, and localized in the other eye by allergic sensitization, or because the uvea forms the only favorable nidus for its development.

TREATMENT

The most important part of the treatment consists of prophylaxis, that is, excision of injured eye before sympathetic ophthalmia develops.

In severe injuries especially where the eye will be sightless prompt enucleation is indicated. Enucleation should be done before sympathetic ophthalmitis has become established. If uninjured eye is normal one month after the enucleation it can be considered safe.

In attempting to save an injured eye promptly excise prolapsed uveal tissue and cover with a sliding conjunctical flap. Other prophylactic measures are: Foreign protein therapy, salicylates, sulfonamides, or neoarsphenamine.

Naturally, if an eye contains a foreign body an attempt will be made to remove it.

After sympathetic ophthalmitis has developed medical treatment consists of atropine locally and administration of foreign protein therapy, salicylates, neoarsphenamine, and recently of sulfonamides. Treatment must be continued about one year.

Some recent American statistics of 125 cases show about 50 per cent retained useful vision and the inflammation subsided.

CASE 1: B. W., eight year old girl. August 15, 1938, right eye was injured with scissors. Cornea was lacerated or cut in its entire thickness, extending from about location of 9 o'clock, 3 mm. from limbus, up and nasalward to limbus at location of 1:30 o'clock. Iris was torn at upper end of laceration, but there was no visible prolapse or iris. Blood filled pupil area and extended to within about 2 mms. of limbus. Lens was also injured. I saw her soon after the injury. I instilled atropine three per cent solution and mercuric chloride ointment 1-5000, applied eye pad, also gave 2 cc. Omnadin intramuscularly. I dressed the eye the following day and gave Omnadin, 2 cc. I dressed the eye daily for four more days and two days later removed the dressing and ordered atropine one per cent three times a day. I saw her every alternate day for two more visits then saw her eight days later and at that time observed a few Keratitic Precipitates. Dr. E. S. Ferguson saw her in consultation, the nineteenth day after injury. One week later right eye appeared whiter and presented less Keratitic Precipitates. Ordered Salicionyl (Upjohn) one teaspoon every two hours for five doses then one teaspoon three times a day. One week later the eye appeared slightly improved, was again seen by Dr. Ferguson. After one more week right eye appeared to be slowly improving. This was forty days after the injury and I advised that she return after two weeks. But she returned three days later at 7:30 P. M. and her mother stated when she awakened that morning both eyes were injected but not uncomfortable. I found both eyes only mildly injected, very faint ciliary injection in left eye. No visible congestion in iris, but there was a small spot of exudate on anterior lens capsule. The following morning there were definite posterior synechia at 5 o'clock and 7 o'clock. That morning I enucleated her right eye. Instilled atropine in left eye at 4 P. M. That day 6 cc. calcium gluconate was given I. V. for carpopedal spasm. 7:30 P. M. that day boiled milk was given intramuscularly. Temperature was 101 rectal. The following day Sulfanilamide grains five three times a day, also Codliver oil and Viosterol were ordered. The following day boiled milk was given intramuscularly, temperature 103 oral. After six days of Sulfanilamide it was reduced to give grains three times a day and boiled milk intramuscularly gave temperature 101 rectal. Three days later typhoid vaccine I. V. gave temperature 106. Three days later typhoid vaccine I. V. gave temperature 103.4. Three days later typhoid vaccine I. V. gave temperature 100.8. The following day, October 15, discontinued Sulfanilamide. Three days later started Salicionyl (Upjohn) one teaspoon every three hours for five doses each day. The following day she went to Mayo Clinic and she was given two injections of typhoid vaccine I. V. Dr. Bair advised repeat course of typhoid vaccine I. V., until the inflammation subsided and kept well under atropine, each course to consist of injection each alternate day for six doses and rest seven to ten days. This was done until April 15th and before starting another course April 24th, routine blood count showed 24,250 WBC with 61 per cent lymphocytes. Daily blood counts were made and typhoid vaccine was discontinued. Tuberculin treatment was also stopped. Tuberculin treatment in gradually increased doses

was begun January 31, 1939, after two negative tuberculin skin tests.

White count had returned to approximately normal by May 15. May 22 another course of typhoid vaccine was given. On May 28 patient again went to Mayo Clinic and again the advice was to continue courses of typhoid vaccine until inflammation subsided.

Septic adenoids and tonsils were removed by Dr. W. L. Bonham November 28, 1938.

I inquired of Dr. Webb W. Weeks, New York City, whether I should use uveal pigment. He replied that he had never been satisfied with the use of uveal pigment in sympathetic ophthalmia.

The general medical management and intravenous therapy and vitamin therapy was done by Dr. Harry L. Deupree.

The patient to have recurrent attacks of redness (Iridocyclitis) until October 9. 1939. I saw her again in February, 1940, and vision was limited to light perception. The eye was quiet but soft and had complete cataract and occulsion of pupil. She was placed in the Oklahoma School for the Blind. Her parents told me she lost all light perception. Diagnosis by Col. J. E. Ash, Army Medical Museum: Sympathetic Ophthalmia.

CASE 2: Mrs. L. W. Age 80. When I saw her on August 28, 1942, had intraocular tension of 40 Schioetz. This eye was treated with miotics until September 17, 1942, when I did an iridencleisis operation. Convalescence was slow. On October 17, 1942, she stated that the right eye had been uncomfortable about three days. On examination I found a slight ciliary injection and a posterior synechia at location of 6 o'clock. Patient was unable to be taken to a slit lamp. Obtained consultation, feared sympathetic uveitis, and that night at 8 P. M. enucleated the left eye. Thirty-six hours later used three per cent atropine in right eye. After 24 hours the posterior synechia was gone. Patient had been slightly distracted, perhaps from atropine, therefore, it was not used again. Neoprontosil grains 15 every four hours was given. After four days it was stopped because of nausea and dizziness. The eye showed no further progress of inflammation. In fact, gradually returned to normal. I last saw her October 9, 1945, and there was no trace of uveitis. Diagnosis by Col. J. E. Ash, Army Medical Museum: Arteriosclerosis; hemorrhagic glaucoma; iridenclesis operation; sympathetic ophthalmia; cataract.

CASE 3: Mrs. O. G. Age 64 years. Had hayfever for 30 years or more. On October 20, 1943, had a cataract extraction intracapsular. McLean corneoscleral sutures peripheral iridectomy and conjunctival flap, over upper one third of cornea, done at Amarillo, Texas. This patient came to me February 4, 1944, with the statement that the right eye had remained irritable and uncomfortable since the operation. The left eye had also become painful and inflammed. She had severe headaches in the region of the forehead and in the maxillary area since about three weeks after operation. Findings: Right eye does not see light. Marked ciliary and conjunctival congestion plastic iridiocyclitis and pupil obliterated. Unable to see fundus. Tension soft. Left eye marked ciliary and conjunctival congestion, keratic precipitates, iris congested. Many small posterior synechia, lens opaque, light perception and projection are present.

On February 17, 1944, right eye was enucleated.

Diagnosis by Col. J. E. Ash, Army Medical Museum: Cataract extraction; prolapse of iris; sympathetic ophthalmia; hemorrhage, intra-ocular, organizing; detachment of retina.

Treatment: Patient was given 25,000,000 typhoid organisms I. V. on February 18, 1944. The following day was given 35,000,000 I. C. and two days later was given 50,000,000 I. V. After the first injection her temperature was above 102 for over six hours. On the following day the maximum temperature was 103.4. After the third dose her temperature reached 103. Two days later Neoprontosil grains ten, every four hours day and night. On the following day blood determination of neoprontosil was 1.3 mg/100 cc. On the following day the blood determination of neoprontosil was 1.8 mg/100 cc. Neoprontosil was increased to 20 grains every four hours day and night on the 24th. On the 25th neoprontosil was increased to 30 grains day and night. On the 27th blood determination of neoprontosil equals 3.3 mg. per cent. On February 27, reduced neoprontosil to grains ten every four hours. On February 29 stopped neoprontosil after 8 P. M. Ordered Unicaps one two times a day. On March 5 salicylates every four hours day and night.

Discharged from hospital March 14, 1944, to continue vitamins, atropine and to use salicylates twice a day. Local atropinism developed and atropine was stopped April 23,

1944. Stopped treatment June 29, 1944. The eye was comfortable but soft and shrinking.

Last saw patient May 16, 1945. Vision was limited to light perception in the temporal field.

COMMENT

I think Mrs. L. W. had insufficient medication to explain her recovery, and I quote Fuchs as follows: "The beginning (in the sympathizing eye) is often insidious. In conjunction with an insignificant reddening of the eye, deposits — which are never wanting in the beginning of a sympathetic ophthalmia — appear upon the cornea. Then a few posterior synechiae and fine opacities in the vitreous develop, and the ophthalmoscope shows hyperaemia of the retina and optic nerve. In favorable cases the disease reaches no higher pitch and at length gets well, leaving either no trace of its presence or a few posterior synechiae. Unfortunately such mild cases are the exception."

CONCLUSION

Sympathetic ophthalmia has been reviewed. Three cases have been reported, one of which recovered. The treatment of most importance is prophylaxis. After sympathetic ophthalmia has developed it should be treated with atropine, foreign protein, salicylates, and sulfonamides.

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AMPUTATION OF THE LOWER EXTREMITIES IN PERIPHERAL VASCULAR DISEASE*

W. PAT FITE, M.D. AND

CHESTER K. MENGEL, M.D.

MUSKOGEE, OKLAHOMA

It is the purpose of the authors of this paper to discuss only those cases in peripheral vascular disease that come through amputation; not to enter into consideration of the preliminary treatment that each case may have had.

The diseases to be discussed are: (1) Buerger's disease; (2) Arteriosclerotic gangrene; (3) Diabetic gangrene; (4) Thrombosis, arterial; (5) Frost-bite.

We have performed various types of amputations of the lower extremities in 63 cases since 1931. Of these, the majority have been for Buerger's dsease, 32; arteriosclerotic gangrene, 13; diagetic gangrene, 8; thrombosis, arterial, 7; and frozen feet, 3. Prior to 1931 we believe that we erred on the side of conservatism in this class of cases, as we had to do many re amputations. Since 1931, our attitude has considerably changed, and as the records will show in these 63 cases, there have been relatively few reamputations. The majority of those done were in cases that were amputated below the knee, and that chiefly on account of the importunity of the patient.

Prior to 1936 we did most of our amputations through the lower portion of the thigh after the method of Gritti-Stokes. Of these there were 19. Since 1936 virtually all amputations in the lower third of the thigh have been after the method of Callander. Fourteen were done through the midthigh. The Gallander type of amputation was eventually adopted in place of the Gritti-Stokes because it gives practically the same type of stump, except that it is simpler to do and is slightly shorter than the Gritti-Stokes amputation, and no bony union is involved. The last two features aid somewhat in the fitting of an artificial limb. The midthigh amputation was resorted to in three cases in which the lower amputation of the thigh did not heal satisfactorily, and in those cases in which the circulatory condition of the limb made it evident that nothing less than a higher amputation would suffice.

Bilateral amputation was necessary in 13 cases of Buerger's disease, two cases of arteriosclerotic gangrene, and one case of frost-bite of the lower extremity.

There were eight cases in which reamputation was necessary, all following amputations done for Buerger's disease, and of these

*Presented before the Section on Surgery, Oklahoma State Medical Association, Annual Meeting, May 3, 1946.

Diagnosis	Patients	Ampt. below knee	Ampt. above knee	Complcations	Reampts	Average Age
Buerger's disease	32	6—toes 15	30	1 died of thrombosis of abdominal aorta	8	43.9
Arteriosclerotic gangrene	13	0	13	2 died later in hosp. with generalized causes	0	61.7
Diabetic gangrene	8	0	8	0	0	56
Thrombosis arterial	7	4	3	1 died in hosp. coronary thrombosis	0	48
Frozen feet	3	1—toe 1	2	1 died following surgery	0	45
TOTAL	63	27	56	5	8	

five were for amputations below the knee. Three were for amputations above the knee.

Of the 63 amputations, 15 were done below the knee in Buerger's disease. None in either ateriosclerotic gangrene nor diabetic gangrene. Four were done in arterial thrombosis, and one for frozen feet.

Buerger's disease: Thirty-two cases were amputated. Fifteen were first amputated below the knee; five had to be reamputated above the knee. In one case, six toes were amputated. Three, who had either Gritti-Stokes or Callander amputations, had to be amputated through the middle of the thigh at a later date. One of these patients died while in the hospital with thrombosis of the abdominal aorta. The average age of the 31 cases was 43.9 years.

As an example of a group of complications that can occur in the case of Buerger's disease, consider the case of P. L., age 45, 1942. 1922: Amputation, right big toe; 1926: Amputation, left big toe; 1930: Ganglionectomy; 1931: Amputation, four toes, right; 1931: Amputation second toe, left; 1932: Ramisectomy; 1932: Amputation right leg, below knee; 1933: Reamputation, right leg, middle third; 1935: Amputation, two toes, left; 1942: Callander amputation, left; 1944: Amputation, right thigh.

Later in 1944 he died of abdominal complications following extensive involvement of the abdominal vessels with thromboangiitis obliterans.

This man was virtually a continuous hospital patient from 1922 until his death in 1944. Would it not have been better from the standpoint of the hospitalization and the comfort of the patient, if he had had a bilateral amputation through the lower third of the thigh, as soon as it became evident that more than the amputation of a toe or two was necessary?

Arteriosclerotic gangrene: Thirteen of these cases were amputated. All were amputated above the knee. Two died later in the hospital, with causes unassociated with the amputation. The average age of these patients was 61 years.

Thrombosis, arterial: Seven cases. Four were amputated below the knee; three above the knee. One patient died later with coronary thrombosis before discharge from the hospital. The average age was 48 years. In these cases, it has been our practice to wait for a fairly well defined line of demarcation before determining the level of the amputation. It is noted that in slightly more than 50 per cent of these cases it was necessary to amputate through the lower thigh.

Frost-bite: Three cases. One of these had only the amputation of several toes. Another had an amputation below the knee, and the third, a double amputation through the mid-thigh. This last case died shortly following the operation. Although he was in very poor general condition as a result of his bilateral frost-bite, he is reported as a surgical death. The average age of these cases was 45 years.

It is interesting to note that the man who had an amputation of several toes, suffered from trench foot in the first World War. Some years later he suffered another frost-bite, which resulted in the amputation of one of his toes. This is mentioned because so far as we have observed no case of trench foot suffered in the first World War has had to be subjected to an amputation on that account; nor has trench foot seemed conducive to later peripheral vascular disease of the unusual types.

Anesthesia: A low spinal anesthesia has been used consistently throughout all of these operative procedures with few exceptions, those in which we tried refrigeration anes-

thesia. The refrigeration anesthesia was satisfactory as far as the anesthesia was concerned. The cases in which it was used had no shock. The healing was slow, but without complications. It requires a lot of time and trouble, but we can see no special advantage in it over a low spinal anesthesia, as that is devoid of shock, is quickly and easily administered, and is not attended with the possibility of nerve degeneration in the stump. General anesthesia has been used in none of these cases. One midthigh in an 82 year old man was amputated under local. Refrigeration is used as a bio-static agent distal to the anticipated level of amputation.

CONCLUSIONS

(1) In peripheral vascular disease, if an amputation is necessary proximal to the toes, with the exception of frost-bite and arterial thrombosis, a Callander type of amputation is preferred unless the condition of the limb indicates that a higher level should be chosen.

(2) Amputation below the knee in arteriosclerotic gangrene, diabetic gangrene, and Buerger's disease, are hardly justified on a conservative basis, as they will undoubtedly lead to a high ratio of reamputations because of various complications of the stump.

(3) A low spinal anesthesia is preferred.

ELECTROENCEPHALOGRAPHY IN THE DIAGNOSIS OF EPILEPSY*

CARL T. STEEN, M.D.

PAULS VALLEY, OKLAHOMA

The secretary of this Section asked that some discussion be made of the pneumoencephalogram. As it would not be possible to do justice to both pneumoencephalography and electroencephalography in the diagnosis of epilepsy in one paper, perhaps my discussant who has had much experience in pneumoencephalography, may be able to devote considerable of his time to this particular diagnostic procedure.

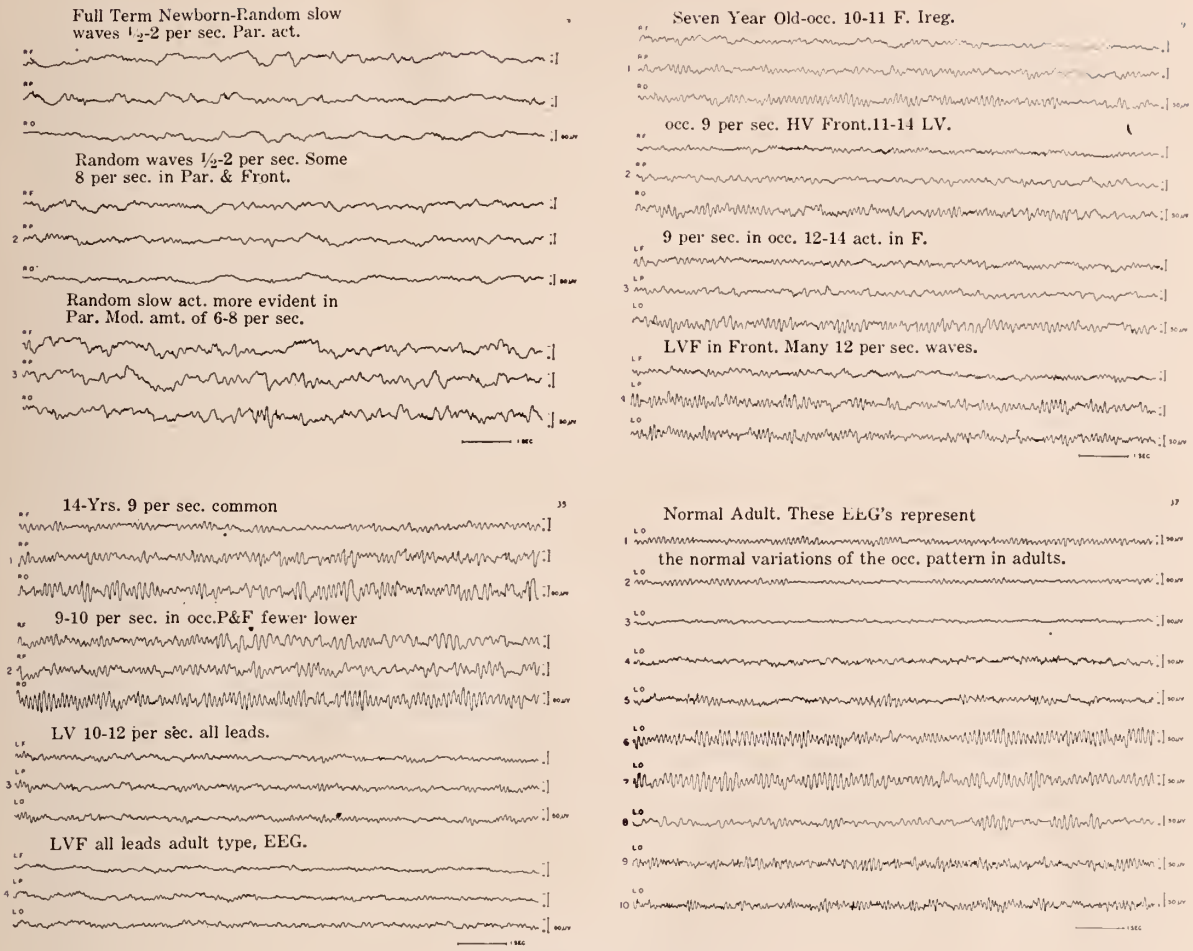
In this talk the ABC's of the electroencephalogram (EEG) as applied to the idiopathic or essential type of epilepsy will be discussed. In order to show the abnormal a preview of the normal will be given so that the two may be compared. To be of most value the definition of epilepsy as a "cerebral dysrythmia" should be kept in mind. As early as 1854 a rhythm of the neurons of the brain had been suspected and studied, but it remained for Hans Berger, the father of electroencephalography, to establish definitely that there was a rhythm or beat to the brain, and that it was coming from a neuron. This compares with the rhythm of the heart beat, respiration, nerves and very likely other mechanisms. In the nerves we know that there is a tendency toward decrease of amplitude and increase of frequency upon stimulation and this holds true of the neuron.

*Presented at the Annual Meeting, Oklahoma State Medical Association, Section on Neurology and Psychiatry, Wednesday, May 1, 1946.

The electroencephalograph is essentially a receiving and recording instrument, the impulses coming in through contacts firmly attached to the scalp over different areas of the cortex and recorded graphically upon a sensory surface much as other recordings are made. The frontal, the parietal, and the occipital lobe areas are most frequently used, but electrodes may be attached anywhere and as many as are desired. The recordings taken are measured in terms of frequency per second and of amplitude or excursion in terms of microvolts. The normal adult frequency is about 10 per second; the amplitude about 50 microvolts. Other terms used, dependent upon variations in frequency and amplitude, are LVF (low voltage fast); LVS (low voltage slow); HVF (high voltage fast); HVS (high voltage slow). The "base line sway" is a sinusoidal wave composed of smaller, superimposed waves.

THE NORMAL INFANT

Considerable variation is seen between the brain waves of the infant and of the adult (Figure 1). At birth there is a so-called random slow wave movement, one-half to two per second, the base line sway, with faster activity superimposed. At six days of age there is a similar picture but some eight per second activity is seen in parietal and frontal leads in this particular recording. At nine days there is a moderate amount of eight



Figures 1, 2, 3 and 4

per second activity while the base line sway is still in evidence.

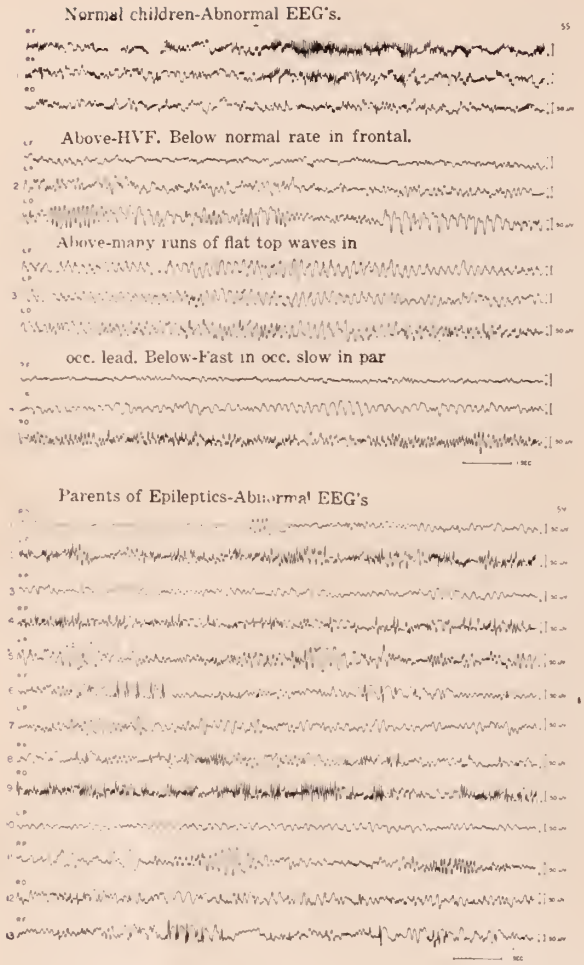
At one year the base line sway is still evident, but under modification; LVF waves occur more frequently; five to six per second waves predominate with an occasional intrusion of nine to ten per second waves.

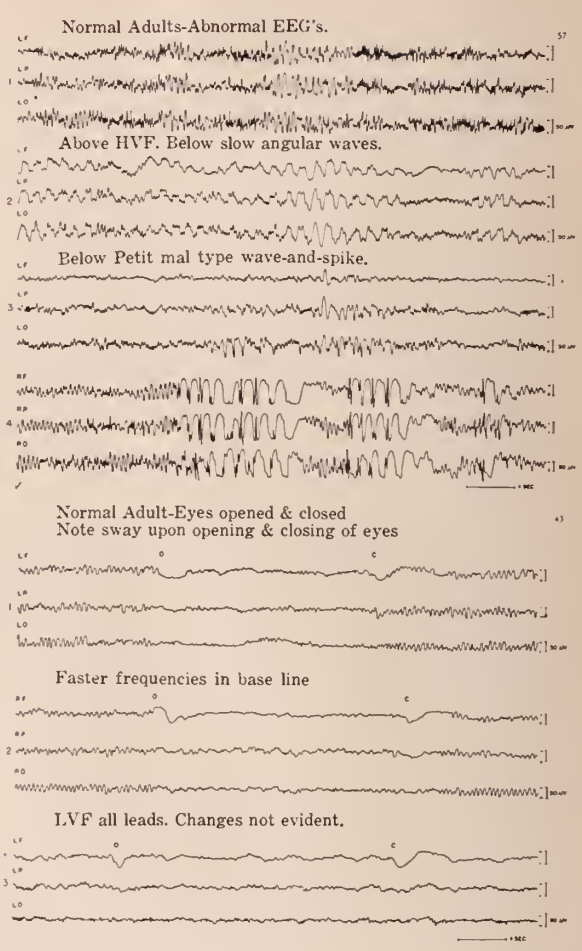
Time and space do not permit an uninterrupted review of each year's change but at seven years we have a juvenile type (Figure 2), featuring an irregularly slow and fast adult frequency at nine to eleven. The occipital lead seems to be the most consistent in frequency and higher in voltage. By the age of 14 (Figure 3) 30 per cent of children have an essentially adult type of EEG. The waves are less fluctuating, about nine to ten in occipital lead, but runs of four to six per second up to the age of 19 may be considered normal, depending upon the number. In the plates recorded the adult EEG (Figure 4) represents the normal variations in the occipital lead, and here the rhythm runs about nine to twelve per second, but there are bursts of LVF. The base line sway may be seen much less marked than in children.

EFFECT OF STIMULATION

In Figure 8 we observe the effect of a stimulus. With eyes closed we have a normal ten to eleven per second activity. Opening them causes immediate faster movements, but lower amplitude. Close the eyes and the former rhythm prevails. Theoretically, at least, simulated blindness could be detected as opening the eyes should not cause fluctuation if they are insensitive to light.

The effect of sleep upon the EEG begins at Stage A with fluctuations ten to eleven per second, followed 15 minutes later by the appearance of slower but occasionally faster waves, Stage B; light sleep, HVS with occasional bursts of fast 14 to 16 per second, Stage C. At Stage D, moderately deep sleep, voltage still is high, with four to five per second frequency, but numerous 14 to 16 bursts. Stage E, deep sleep, there are random slow waves and of very high voltage with





Figures 5, 6, 7 and 8

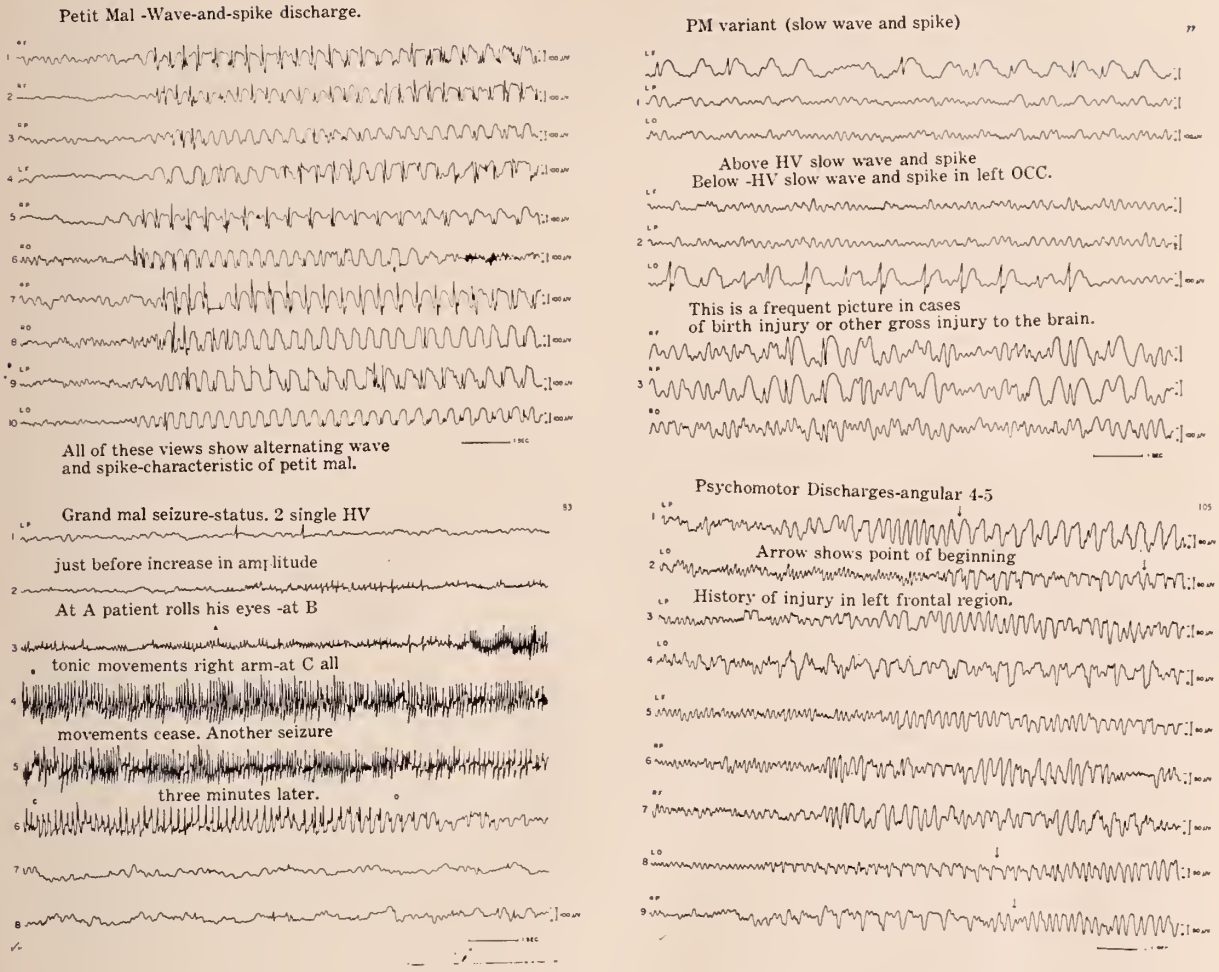
occasional 14 to 16 per second bursts. In Stage F the 14 to 16 bursts have disappeared and at 2:15 A. M. irregularities in rhythm and low voltage have appeared and remain until patient is awake at 7:00 A.M. at which time he resumes his continuous ten per second activity.

An EEG is shown of normal children with abnormal findings (Figure 5). There is no history of familial nervous or mental disease, nor history of convulsions. In these there are marked changes in rate and voltage in several combinations. In an illustration representing EEG's of normal adults (Figure 6) we have an even more noticeable divergence from the normal. There is HVF alternating with six to seven per second, a picture very similar to that seen in grand mal discharges. Others show psychomotor and larval seizure types of EEG's. The parents of epileptics (Figure 7) show a considerably greater number of variations from the normal than do parents of normal children. These variations may occur in frequency, amplitude and shape of the waves. In some instances they are frankly epileptoid in character.

EEG'S OF EPILEPTICS

All of the illustrations shown have been taken from the very informative atlas by Dr. F. A. Gibbs and Dr. Erna L. Gibbs, who divide the epileptic electroencephlograms into four groups, the petit mal, petit mal variant, grand mal and psychomotor seizures. The petit mal (Figure 9) is represented by an alternating wave and spike formation with a repetition of three times per second. In this type there is transient loss of consciousness but no convulsions.

The petit mal variant (Figure 10) has a slow wave and spike. In all of these recordings there is presumptive evidence of brain pathology in the patient; one patient was a forceps delivery and one had a cerebral hemorrhage at birth, while the other had early



Figures 9, 10, 11 and 12

convulsions and muscular incoordinations. This type is seen quite often in traumas at birth or later.

The distinguishing feature of the grand mal type of EEG (Figure 11) is the high voltage spikes. These spikes are probably the most consistent of all findings and may occur with petit mal wave and spike and even with myoclonic jerks, lending credence to the idea that petit mal and grand mal and some of the myoclonias are related if not identical. The clinical picture of the grand mal seizure we all know.

Probably the most interesting pattern as well as clinical manifestation is seen in the psychomotor seizure patient (Figure 12). The wave pattern is about four to six per second, and typically has a flat top. The so-called epileptic equivalents belong in this group. These may consist of amnesic states, somnambulism, fugues, attacks of abnormal rage, and behavior disorders. The seizures are characterized by irrational, but apparently purposeful movement, impairment of consciousness, with emotional out-bursts of rage, anxiety, discomfort or fear. Hallucinations and delusions may be very prominent, but the patient may be entirely unconscious of his acts.

A. M. A. PLANS FOR CENTENNIAL SESSION

Arrangements are being made to make the A. M. A. Centennial Session, at Atlantic City, June 9 to 13, 1947, "one of the greatest and most interesting medical assemblages ever convened". Each scientific section will feature a distinguished speaker from abroad.

The Oklahoma State Medical Association will sponsor a special train at Atlantic City, with a side trip to New York City, Canada and Niagara Falls. A wonderful 17 day trip in all! Watch the Journal for details.

CLINICAL PATHOLOGICAL CONFERENCE

The School of Medicine of the University of Oklahoma

Presented by the Departments of Pathology and Medicine

F. REDDING HOOD, M.D. AND HOWARD C. HOPPS, M.D.

DR. HOPPS: Our case today illustrates some uncommon effects of a relatively common disease and affords an excellent opportunity to discuss unusual aspects of the pathologic physiology and pathologic chemistry of heart failure. We are fortunate in having Dr. Hood to discuss and analyze the clinical aspects of this case. Dr. Hood never saw this patient nor has he been given any information save that included in the mimeographed protocol which you received two days ago.

PROTOCOL

Patient: C. N., white male, age 41; admitted December 6, 1945; died February 2, 1946.

Chief Complaint: Dyspnea, orthopnea and abdominal swelling and tenderness.

Present Illness: This 41 year old white male had had acute rheumatic fever at the age of three and one-half years and this was followed by chorea. A second acute attack (without chorea) was experienced at 13 years. There were no recognized signs or symptoms of cardiac failure following either of these attacks. About ten years ago (age 31 years) the patient noticed a "squeaking" sound, synchronous with the heart beat, when he lay on his left side. Soon after this there was marked palpitation of the heart upon physical exertion. This continued and shortly thereafter there was dyspnea upon exertion which was progressive. At times there would be dull precordial pain also. These symptoms necessitated more and more restriction of physical effort until finally, for the last five or six years, the patient has been unable to work at all. About three year ago (1943) he consulted a doctor who prescribed digitalis. After five to six months of this medication the patient was so improved that he discontinued the drug. He remained more or less asymptomatic (marked restriction of activity) until about seven months before his death at which time he noticed that his feet and ankles were swollen and also his abdomen began to be distended. Again he consulted a physician who prescribed digitalis and administered some intravenous medicament (mercurial diuretic?). There was temporary improvement but soon he became nauseated and this was attributed to too much digitalis. Nausea persisted to the time of admission and symptoms and signs of cardiac failure became progressively worse. He was first seen at the Outpatient Department on December 6, 1945, and was admitted to the University Hospital on the same day.

Past and Family History: Fifteen years ago malaria was diagnosed by blood smear and apparently cured within three or four months.

Physical Examination: The patient was a well developed and fairly well nourished, pale white male propped up on three pillows with obvious respiratory difficulty. Temperature was slightly subnormal. Crepitant rales were heard at both lung bases on inspiration and expiration. There was no dullness. The heart was markedly enlarged and extended to the anterior axillary line in the sixth interspace. The apical impulse was diffuse. "Double mitral murmur is present and systolic transmitted to axilla. Systolic murmur is heard over all other valve areas also." The rhythm was absolutely irregular. Blood pressure was 128/70 and pulse 60. The liver extended to the level of the umbilicus and was tender. The spleen was questionably palpable. No fluid was demonstrable. There was no edema of the ankles upon admission.

Laboratory Data: Upon admission hemoglobin was 14 Gm. per cent, red blood cells 5.28 and white blood cells 10,350/cu.mm.

Upon urinalysis maximum specific gravity was 1.015 (Mosenthal) and there was 1 plus proteinuria and occasional white blood cells. Subsequent determinations revealed little change save that the white count dropped to 5,900-7,200. Plasma proteins were within normal on admission. The icteric index was reported as high as ten; the cephalin flocculation test was plus minus at 24 hours and 2 plus at 48 hours. Following administration of bromsulfalein, at five minutes the value was 20 per cent and at 30 minutes 14 per cent. Prothrombin time was normal. A smear for malaria was negative. Electrocardiograms indicated right ventricular preponderance. X-rays showed cardiac enlargement with pulmonary congestion.

Clinical Course: The patient was given digitalis and salyrgan on several occasions with moderate relief. In spite of quinidine, auricular fibrillation persisted. Although there was apparent improvement of the "cardiac condition", edema of the lower extremities developed, and the patient did not feel well, — he had little appetite and he slept poorly. Orthopnea and dyspnea were constantly present. On January 8, 1946, (33rd hospital day) plasma proteins were 3.2 per cent with A:G = 2.2/1.0 and ten days later 2.7 with 1.3/1.4. There was considerable question as to whether or not hepatic disease was a major factor in this condition. On the 68th hospital day the patient developed marked pulmonary edema and became very dyspneic and apprehensive. Aminophyllin and morphine gave but transient relief. Pulmonary edema became progressively more marked, cyanosis developed and the pulse became gradually reduced in both intensity and rate. The patient expired approximately 28 hours after "marked pulmonary edema" was first noted.

CLINICAL DIAGNOSIS

DR. HOOD: The initial complaints of dyspnea, orthopnea, abdominal swelling and tenderness immediately suggest a primary disease in either the lungs or the heart. From the present illness we learn that 38 years ago, at the age of three and one-half years, the patient had rheumatic fever followed by chorea. Chorea complicates rheumatic fever approximately one time in two or three and is more often seen in the female. When chorea is associated with rheumatic fever there is a pronounced decrease in the tendency toward residual cardiac disease. The patient had rheumatic fever again at the age of 13 years and this time he did not have chorea. From the history then, we have a definite basis for the development of organic heart disease. A period of 18 years elapsed without evidence of untoward signs or symptoms when, at the age of 31, the patient first noticed a squeaking sound, synchronous with the heart beat. This is a rather bizarre symptom and must be carefully evaluated; it may be very significant or, on the other hand, it may mean very little. Pericarditis may produce such a symptom, and pericarditis often accompanies acute rheumatic fever. Rarely would it occur at this late date. We do not have sufficient data to determine with certainty whether or not this symptom was associated with pericarditis. Pericarditis of rheumatic origin does not usually become adhesive and other types of pericarditis are usually associated with fever and leukocytosis. Rheumatic fever, as such, does not ordinarily produce pain, whereas pericarditis often does. We are told that the patient experienced pain and palpitation with this squeaking sound and I am inclined to interpret this as an effect of adhesive pericarditis. We must bear in mind however that cardiac dilatation, with or without hypertrophy, may produce the same signs as pericarditis. A progressive increase in these symptoms, along with exertional dyspnea, made it necessary for the patient to restrict his activity more and more until finally, after four or five years, he was unable to work at all. It is noteworthy that he did not complain of dependent edema or pain and tenderness of any abdominal viscera. With this, we would expect that the major organic defect involved the mitral valve. It is possible that the aortic valve was also affected. The lesion must have been in the left side of the heart in order to produce signs and symptoms of pulmonary congestion. Following treatment for a time, with digitalis, he improved considerably and remained much improved for several years until he had another exacerbation. Following treatment with digitalis a second time, he became nauseated and this was attributed to too much digitalis. It is important to remember that nausea, under such conditions, may come about either from too much or *too little* digitalis.

Data obtained at physical examination supports our previous contention. The lungs exhibited only those signs which we would expect as a result of pulmonary congestion. Information concerning the heart is incomplete. The heart was enlarged and the P. M. I. was diffuse which is good evidence that the

heart was dilated as well as hypertrophied. The mitral murmur is poorly described in that the degree of force and variation of sound throughout its course is not described, nor is it precisely localized. There are many types of lesions which can produce a "double" mitral murmur. There has been much controversy over whether or not pure mitral insufficiency can occur upon an organic basis and I should like to have Dr. Hopps express his views on this subject. I should like to discuss, in detail, the characteristics of various murmurs such as the Graham Steele and the Austin-Flint murmur, but my time is almost up. The irregular irregularity of cardiac rhythm is indicative of auricular fibrillation and we know that a common cause of this is mitral stenosis. To me there are but three indications for the use of quinidine: (1) an abnormal rhythm arising in the ventricles, if it cannot be controlled otherwise; (2) auricular flutter, when it cannot be converted into a normal rhythm by digitalis and (3) for the conversion of auricular fibrillation when there has not been irreversible cardiac damage and when the etiologic factor has been removed, e.g., thyrotoxicosis. I am firmly opposed to the use of quinidine in auricular fibrillation such as this man manifested because, first, there is great danger of dislodging auricular thrombi with resulting serious or even fatal embolic phenomena. Even though quinidine might change fibrillation to a normal rhythm, the underlying organic defect would not be altered and whenever the quinidine was stopped, there would be reconversion back to fibrillation. Secondly, the ventricular rate can more easily be controlled by digitalis in the continued presence of auricular fibrillation.

CLINICAL DISCUSSION

DR. HOPPS: One of the things which concerned us most was that in spite of apparent improvement of the cardiac condition, the patient developed a new set of signs and symptoms characterized principally by the development of dependent edema, marked hypoproteinemia and, finally, a rather sudden episode of progressive marked pulmonary edema. Would you comment upon this aspect of the case Dr. Hood?

DR. HOOD: These findings suggest an hepatic insufficiency and may be related to marked congestion of the liver. There is the possibility too that this condition may have been complicated by nephrosis and that renal disease was responsible for these manifestations.

ANATOMIC DIAGNOSIS

DR. HOPPS: It is rather obvious that this man had several attacks of rheumatic fever and that he suffered from organic heart disease. It seems fairly certain too that his heart was hypertrophied and dilated, that he had auricular fibrillation and probably mitral valvular disease. It is far from obvious however why he developed such a marked hypoproteinemia terminally with marked edema of the extremities, and why he rather suddenly exhibited a marked progressive pulmonary edema which brought about his death in 28 hours.

To clarify the first point we must first consider the usual effects of chronic passive congestion of the liver. Those of you who have consulted the various texts in relation to this point, know that even severe congestion of the liver does not usually lead to detectable hepatic deficiency. This seems rather odd when upon histologic analysis we find evidence of marked centro-lobular atrophy, additional degenerative changes of the periphero-lobular tissues and various degrees of fatty change. Its explanation lies with the relatively enormous hepatic reserve with which nature has seen fit to provide us. Actually, the normal hepatic functions can be carried out with but from 1 8 to 1 11 of the liver. This, incidentally, is the explanation of why hepatic function tests become altered only in the face of marked hepatic disease. We must assume that in this patient some process had affected the liver, perhaps gradually and without obvious effect, until almost all of its reserve capacity was lost. After such a loss of hepatic reserve, any further effect, especially if the process were accelerated, would bring about a more or less *sudden* manifestation of hepatic deficiency even though 80 to 90 per cent of the liver were *previously* destroyed. The most obvious effect of hepatic deficiency in this case was the marked drop in plasma proteins. Without an abnormal loss of protein such as would result from marked proteinuria, draining fistulae, exudating wounds, etc., a rapid drop in plasma proteins can only be explained by defective production of plasma proteins. Although toxic necrosis of the liver or possibly cirrhosis might explain this turn of events, we found, at necropsy, that the liver was approximately 40 per cent enlarged (2150 grams) and exhibited the marked nutmeg mottling characteristic of chronic passive congestion. Microscopically we found very marked passive congestion with extensive central necrosis involving perhaps 90

per cent of the parenchyma. That tissue not necrotic exhibited marked degenerative changes. Associated with this there was considerable increase in periportal connective tissue to a degree which warranted a diagnosis of early cirrhosis. Was this cardiac cirrhosis? So-called cardiac cirrhosis is actually an ill-defined entity in spite of the standard description given in most texts. Some persons consider that cardiac cirrhosis is characterized principally by centro-lobular fibrosis, but I do not believe that this is the usual case. Since the major portion of interstitial fibrous tissue lies normally in the portal areas, any diffuse stimulus, even though it be most marked in the centro-lobular area, may stimulate fibroplasia which begins and is most pronounced in the periportal regions.

With regard to the terminal episode of pulmonary edema we must consider two possibilities — either a primary left-sided heart failure of sudden onset, or multiple recent pulmonary infarcts. In this particular case, necropsy revealed the primary change to be in the heart. The heart weighed 470 grams, approximately one and one-half times the normal weight. Especially the right ventricle was hypertrophied and its wall was approximately four times the normal thickness. There was but slight dilatation at the time of necropsy. The mitral valve cusps were considerably thickened especially at the line of closure. Chordae tendinae were thickened up to four or five times, more opaque than usual and at their point of origin from the papillary muscles, there was focal scarring. The cusps were not fused to each other and there was no stenosis. There was moderate insufficiency, however, and the explanation for this will answer Dr. Hood's question. In this case, as frequently occurs following rheumatic fever, the chordae tendinae and tips of papillary muscle become fibrosed and, in the course of time, this scar tissue contracts to shorten these structures. As a result of this, the mitral valve cusps are prevented from coming into apposition and hence a morphologic basis for mitral insufficiency. This then was the basis for the heart failure and the marked pulmonary congestion which we found. The aortic valve was involved to a lesser extent and probably did not contribute greatly to the heart failure.

The explanation for the terminal pulmonary edema was found in a recent cardiac infarct (36-48 hours old) in the posterior aspect of the apex of the left ventricle. This, added to the rheumatic lesions, brought



FIGURE 1
Longitudinal section of the heart illustrating the marked thickening and contracting of chordae tendinae attached to the mitral valve. Note also the thickening of the mitral valve. Both ventricles are hypertrophied, especially the right.

about a sudden left heart failure, a marked increase in pulmonary congestion and the pulmonary edema which actually produced death by causing asphyxia. The rather sudden onset of edema of the extremities may be explained upon the basis of passive congestion plus *hypoproteinemia*. Additional effects of nutritional edema included ascites (300 ccs.), hydrothorax (2100 cc.) and hydropericardium (250 cc.).

DISCUSSION

QUESTION: Were the hepatic function tests done before or after hypoproteinemia was found?

DR. HOPPS: Shortly after admission, plasma proteins were determined as normal. Hepatic function tests were done shortly after this time and did reveal "slight" hepatic insufficiency. Thirty days later the plasma proteins were found to be markedly decreased. Ten days later they were decreased still further.

NATIONAL CONFERENCE ON MEDICAL SERVICE

The 20th Annual Meeting of the National Conference on Medical Service will be held at the Palmer House, Chicago, Illinois, on February 9. Registration will commence at 9:00 A.M. and the program will include discussions in the fields of national affairs, economics and medical education. All physicians are invited to attend, there is no registration fee. Dr. Cleon A. Nafe, Indianapolis, is President of the Conference and Dr. Creighton Barker, New Haven, is the Secretary.

Special Article

A DREAM: OF THE UNIVERSITY OF OKLAHOMA SCHOOL OF MEDICINE AND HOSPITALS*

J. P. GRAY, M.D.

The acceptance of the invitation to present impressions on this topic was evidence of boldness, perhaps even temerity it is now realized, but the opportunity to dream was intriguing and too attractive to let pass unattended. In the words of the President and of the Chairman of the Program Committee, the invitation was set forth in the terms "We know what you have at the University of Oklahoma School of Medicine and Hospitals but we don't know what you have hopes of doing with what you have. Won't you just dream aloud a bit for us and tell us what your hopes and ambitions are? In other words, if you had all the resources that you could ask for, and a free hand to develop as you would like, what would you do with the School of Medicine and Hospitals?"

The term "resources" implies something more than money, and this, indeed, is important in dreaming. To have adequate funds would mean much but to have only funds would not make possible the development of a school of medicine or a medical center. Needed also are certain factors which money cannot provide, such as a purpose, ideas and ideals, hope, faith, charity, selflessness, morale, esprit de corps, teamwork, a deep interest in constant effort at improvement, and the ever continuing search for the truth. So, to dream under these circumstances, with all the resources, including money and the facilities that money can purchase, plus the other resoruces, a few of which have been mentioned, is an assignment that is attractive and intriguing, and much easier than the task might have been had the resouces available been limited to money.

For the school itself: the hope that the school might continue to be young in spirit — growing and developing with the support of an awakened, enlightened, alert, and interested populace and particularly of the two segments of the populace so important to the State supported medical center, the members of the practicing medical profession and of the ancillary professions, and the legislators — remaining relatively small in size, with a premium on quality rather than on quantity — attracting financial support permitting provision of adequate physical facilities for teaching, for research, for service — that the school may take its place among the finer, smaller American schools of medicine, serving Oklahoma and the Southwest, particularly, as a dependable source of supply of outstanding physicians who hold fast to the highest standards of American medicine as they find opportunity to serve communities of the area.

For the faculty: the hopes that there might be an enhanced interest on the part of faculty members in the student of medicine, whether he be undergraduate or graduate, as a younger oncoming colleague needing and wanting counsel and encouragement — that the faculty might be made up of staff members, including heads of departments, who were selected on the basis of training, experience, teaching interests and abilities, research, and interest in students as well as in patients, interest in medical sciences as well as in clinical fields — that the members of the faculty might be provided with opportunities and encouragement in teaching and in research through more nearly adequate salaries, appropriate facilities, lighter loads in other activities (through additional staff members) in order that there may be more intensive teaching and research activities.

The faculty would include full-time men both in the basic medical sciences and in the clinical fields. Similarly, the part-time and

*From a talk made before the Oklahoma County Medical Society, October 22, 1946.

voluntary staff members would continue to serve as members of the faculty actively participating in teaching, more particularly in the clinical fields probably, but, for this group as well, because of the importance of the sciences, opportunities and encouragement would be developed whereby greater interest might obtain in the laboratory and in the library, as places where clinical problems could be studied, perhaps solved. Just as the full-time staff member is frequently highly trained in the basic medical sciences and brings these fields of knowledge closer to the clinical problem, so should there be opportunity of closer relation of the clinical fields to the sciences that the younger colleague in medicine may understand earlier in his career the relationship between the science and the art of medicine.

The part-time teacher and the voluntary teacher, too, have their places in medical education, for the art of medicine is still of great importance (may it ever be so!) and must not be lost so long as the objective of medical education is the training of personnel to provide medical care. The art of the practice of medicine should be taught best by those who practice the art itself. The undergraduate student of medicine must have the viewpoint and the benefit of the hard earned experience of the mature, successful, competent physician in practice.

While to some it might appear that there is inconsistency and even conflict of principles in the combined full-time and the part-time and voluntary teaching staffs set-up, in the ultimate concept these supplement each other. In the environment in which harmony, mutual respect, confidence, interdependence, teamwork, reliance, and selflessness obtain, the composite team can do the complete job with the result that the student of medicine, be he undergraduate or graduate, gains a more wholesome and respectful concept of medicine as a profession. The full-time faculty member, unhampered by the demands and rigors of private practice, devoting his full-time to teaching, actually has the same objective, as a teacher, as the part-time and voluntary teacher has, namely, making a contribution to the knowledge and understanding of medicine in the oncoming younger fellow-student of medicine. Most of the difficulties which arise in controversy over the combined full-time and part-time and voluntary teaching staff arise from the deviation from full-time status to that of competition in practice and, perhaps exploitation of teaching status. It is believed that the competitive status is not good and that perhaps the exploitation of teaching status has been carried out by both groups. In any event, if full-time men are forced into cloistered status, both the student and medicine as a whole, lose. There might be solution of the problem by limitation to consultative opportunity under specific circumstances. Medical education needs the coordinated effort of both groups and there is an important role to be played by each.

In most schools of medicine, selection of teachers is made on the basis of training, experience, research (frequently measured by the number of publications with secondary interest in the qualitative factor), membership in professional organizations, and other evidence of professional standing. These are important, obviously, but it is believed that certain other qualifications are of great importance also. These might include: interest and ability in teaching, open-mindedness, honesty, courage, and, for want of a better term, "personal attractiveness" including: appearance, grooming, culture, behavior, emotional stability, warmth (interest in other persons, particularly in colleagues or co-workers, and in students), attitude, address, et cetera. The teacher of medicine plays a very important role in the establishment of the pattern of the physician of tomorrow, as he teaches the undergraduate student of today. The high standards of current medical education must be guarded zealously and constantly improved if American medical education is to continue to maintain the world leadership now enjoyed.

For the student: the hopes that, once selected for the privilege of the study of medicine, he may have continuing assurance, encouragement, and helpfulness from interested teachers of medicine, to the end that, provided he applies himself diligently, consistently, and persistently, he may make of himself a physician and that the years he spends as an undergraduate student of medicine are the happiest, most satisfying, years of his life. The opportunity of achieving these objectives, obviously, does not exist until two basically important factors operate: the faculty whose members want these objectives to be achieved, and the carefully selected students who are ready for relationships which will permit them to achieve the objective. The hope for such a faculty has been expressed.

The selection of students is one of the most important functions of a school of medicine. If the objective indicated would be achieved,

the most rigorous selection possible is necessary. Outstanding scholarship, in itself important, is not enough, being inadequate as a measure of other desirable attributes and capable of being possessed, it must be admitted, by some who are inadequate in other respects for medicine. Evaluation, even appraisal, is very difficult, but it must be attempted by qualified, interested, competent persons who have understanding of the needs of medicine and who keep constantly in mind the qualities required by medicine of her followers, as well as of medicine by the public. Breeding, culture, attitude, aptitude, character, integrity, personal appearance, emotional stability, address, dress, probity, behavior, poise, equanimity, interests, hobbies, community and social interests, sobriety, sense of humor, sense of values, faith in man, faith in The Supreme Being, these are some of the points to be considered in selection. The selector, or admissions committee members, owe it to medicine, to the public, as well as to the applicant and to his or her parents, to give consideration — as careful consideration as possible — to these and to other important attributes as qualifications for the study of medicine and the rights and privileges of the doctorate.

Even with the most careful appraisal and the most sincere attempt at adequacy of selection, errors are made, perhaps will continue to be made, both in admitting those who actually are not suitable for the privileges and honors of practice, and in denying admission to those who might have been able to make of themselves good reliable physicians. Continued efforts, ever intensified, are warranted, however, in an effort to reduce the inadequacies of selection. In addition, new techniques, as these are developed, should be utilized and will be in effect if they offer reasonable promise of usefulness.

It should be emphasized, too, that the need in medicine has transcended the premedical educational background, in vogue until recent years, that is predominantly in the sciences, to that in which the desirable premedical education includes a good general education superimposed upon which is a sound understanding of the sciences of biology, chemistry and physics. Usually, such understanding is provided by the minimum requirements in courses in these fields with the result that the student is sufficiently well equipped to approach the medical sciences with adequacy of skill and concept of principles. Furthermore the importance of ability in the use of English, both in speech and in writing, cannot be overemphasized, even at the cost of a reading knowledge of French, German, Spanish, or Russian.

The individual selected for the privilege of the study of medicine should be respected and worked with by those of us interested in his education in medicine, not only as one entering current medicine and looking forward to practice in the next few years, but as our successor in medicine, the physician of 1956, 1966, and 1976. The responsibility is clearly set forth: it is very real: it is highly important.

For the physical plant: since what we have is well known, it is probably as true that what we do not have is well known, but the dream of the future requires that mention be made, at least, of what we should have. The less than 400 beds now available in the University Hospitals, distributed as they are, provide far too few beds for the satisfactory teaching of medicine for the numbers of students admitted to the School in recent years. Hospital and outpatient clinic facilities need to be expanded to a minimum of twice the present capacity, and with this expansion, laboratories, especially research and clinical laboratories, likewise, need to be expanded. Library facilities have been inadequate for years and the present situation is acute. These definitely indicate the requirement of an addition to the School of Medicine Building in which would be provided also space for a developing curriculum in public health and for the curriculum in medical social work. In most schools of medicine in the United States, recreational lounge facilities for students are inadequate, but in the University of Oklahoma School of Medicine such facilities do not exist. Unless provision therefor is made, it is little short of ridiculous to expect students to find wholesome, adequate outlets for physical recreation and social intercourse as a group with common interests.

The incorporation of the Oklahoma Medical Research Foundation, achieved in August 1946, is a definite step forward toward the realization of one of the dreams of the late Dean Tom Lowry. A successful campaign to raise an endownment fund to support research in an institute to be erected in the immediate vicinity of the School, will assure a research program that will mean much to Oklahomans and to Oklahoma and Southwestern medicine. If after these developments are provided for, and if space allotted for the proposed City, City-County, or County Hospital permits, there may be located on

the plat of ground east of the School, the 1000-bed Veterans Administration Hospital, recently approved by the Federal authorities for Oklahoma City. These, of course, are in addition to the development of the immediate future with funds appropriated by the Legislature of 1945 for a wing to be added to the University Hospital, for a new nurses home, and for an enlarged power plant and laundry.

From the viewpoint of the taxpayer, the benefits of the School and Hospitals are expected to include a rather extensive service factor. Present facilities limit the service provided to residents of the State to a rather small segment of those really needing such care. While the primary reason for the existence of the Hospitals lies in the basic need of the hospitalized patient for medical education, the service factor has significance that is of undeniable importance. It would seem reasonable also, as pointed out by interested persons in high State positions, that all of the costs of the maintenance and operation of the University Hospitals, not even to mention capital expenditures for their physical development, should not be charged to costs of medical education, in all fairness, since the service factor has value as a public health and welfare function of government and should be charged thereto. Although it appears not to be possible, without an amendment to the State Constitution, to apportion costs for hospital service rendered by a State institution to the counties from which the patients come, and to the State, jointly, it would seem desirable that such procedures be legalized in an effort to place the responsibility for the costs of the tax-supported hospital care in closer proximity to those receiving such care. Even though the hope that more nearly adequate financial support might not be realized, there would be reason to believe that there would be more extensive and more intensive community interest, on a State-wide basis, in the University of Oklahoma School of Medicine and Hospitals.

With the extension of service, made possible by the development of physical facilities as outlined, the School itself would extend its educational activities and interests particularly into the graduate and postgraduate phases of medical education for the physicians of Oklahoma, with such activities to be developed on the University campus in Oklahoma City inevitably, but also to be extended out over the State. Although few schools of medicine in the United States have had continued interest in the graduate in medicine, beyond the internship and residency, World War II has given impetus to such developments in several, and the University of Oklahoma should be developing its interests and activities in this same direction.

Finally, for the curriculum: the hope that the University of Oklahoma School of Medicine might accept the challenge presented by current problems in medical care and the opportunity of making basic contributions to medical education in fulfilling the responsibility stated in the catalog (1943) as the objective of the School. The catalog states: "Briefly, the desire of the school is to offer theoretical and practical training which will fit its graduates to be competent general practitioners."

The extensive developments and significant progress made possible in medicine by specialization that was inevitable during these past 40 rich and turbulent years, have placed American medicine in the responsible but precarious position of world leadership. Every effort must be made to keep that leadership, and specialization is an inherently important — perhaps the paramount — factor leading to the present day status. But, with specialization and development and progress of medicine, other problems have arisen, particularly in medical care for all segments of the population, and especially for rural population groups. It is obvious, even on superficial appraisal, that the problem is more inclusive than the one field of medicine, and that there are other aspects as economic, sociologic, educational, even recreational and religious. But it is believed that the present day curriculum in medicine has played a role in the development of the current situation and that revision of the curriculum will be necessary if medical education meets the need.

It is undeniable that two-thirds of the graduates in medicine enter special fields in medical practice and that four-fifths of the medical problems in clinical practice could be handled satisfactorily, perhaps even more effectively, by the generalist than by the specialist. Group practice, although demonstrated to be effective in many instances, frequent examples being available in Oklahoma in small communities as well as in large cities, does not offer the complete solution to the problem of rural medical service. Modern medicine, as practiced in the large teaching center and as taught the undergraduate and graduate student of medicine, cannot be practiced satisfyingly or satisfactorily without laboratory, x-ray, and hospital facilities and the physician needs also ancillary per-

sonnel, including the dentist, the technologist, and the nurse, in order to practice the quality of medicine which he knows and wishes to bring to his patient.

The curriculum in medical education today is the outgrowth of those same 40 years' progress. However, except for minor adjustments in time allocation and placement of courses, few significant changes in the curriculum have been made during the period except the addition of new courses and new material as research and clinical experience demonstrated advances. An additional factor, definitely related to progress but also responsible for fragmentation of knowledge and resultant lack of correlation and integration, is that of specialties in education with instruction by specialists highly trained and well qualified in their fields. With these developments, the general aspects of medicine have been neglected to the extent that the student is left to do his own correlation and integration. There are those who believe that to attempt integration and to teach principles rather than details, perhaps even to teach at all (believing that the best teaching in medicine is no teaching!) would be to "spoon-feed". It is submitted, however, that medicine demands the best teaching possible, by the best teachers obtainable, and that the curriculum be the best planned possible, to meet the important needs of the profession.

As Alan Gregg puts it, "We ought, before now, to be teaching students of medicine: to made observations accurately and to record them adequately; to analyze and to interpret those observations and recordings; to apply such information to problems that they may be solved; with compassion (sic). Another way of saying it is that we should be preparing students today, not alone to acquire and to understand that knowledge which we have acquired thusfar, but to participate in the acquisition and understanding of that knowledge which will come tomorrow."

It is asked that these comments not be misunderstood. Specialization is important and has made possible our advancement in medicine to our present status. But there is a place in the scheme of things medical, too long neglected, for the man who is a generalist, who needs to have training for his work as generalist, who needs to be the most resourceful man of all those in medicine. Such training would be the better basis upon which specialty training would be superimposed. The University of Oklahoma School of Medicine has an opportunity and it is hoped that sincere, earnest, concerted effort might be made by the faculty to solve this problem.

As every dream has some basis in experience or ambition, or hopes, or desires, so has this dream of the University of Oklahoma School of Medicine and Hospitals. Some parts of the dream stand out in clear definition as within reach — other parts are less well defined, perhaps even hazy in outline, probably not within easy reach. The role of the dean in fulfilling these hopes and ambitions — in making the dream a reality — is perhaps, mainly as catalyst, as well as defender of budgets, friend of students, and guardian of standards in medical education.

The University of Oklahoma School of Medicine and Hospitals is your institution and it merits your interest and support. It is your and my job to do all that we can to make the School and Hospitals what they should be and can be. Together it is within reach. Organized medicine, it is hoped and expected, will continue, in Oklahoma, to participate in medical education, to support medical education, to take a militant stand for enhanced standards of medical care and of medical education. Your helpfulness has meant much to the School and the Hospitals in the past and it is very much appreciated. And may we look forward to its continuance down through the years to come?

GOING TO THE A. M. A. MEETING NEXT SUMMER?

The American Medical Association is going to celebrate its centennial in Atlantic City, June 9-13, 1947. Elaborate plans are being made for this celebration.

Only Fellows and Invited Guests are eligible to attend. Membership in your state society is the primary qualification for Fellowship in the A. M. A. Fellowship dues and subscription to The Journal A. M. A. are both included in one annual payment of $8.00, which is the cost of The Journal to subscribers who are not Fellows.

If you are not a Fellow and plan at attend the Atlantic City session, which will be a milestone in medical history, you can save yourself considerable time and confusion when registering, if you will write now to the American Medical Association, 535 North Dearborn Street, Chicago 10, and ask if you are eligible to become a Fellow.

President's Page

The Year Nineteen Hundred and Forty Seven will bring about a change in the political leadership of our State and Nation. Viewed from a strictly political standpoint, this reflects, in one instance, a change in individual leadership, in the other a political party. In either case the seriousness of the problems of America's continued existence as a democracy are the same as prior to the changes in leadership, and calls for calm, cool, deliberate consideration.

Not all of the calm, cool and deliberate consideration must be in the halls of our State and National Capitols but must also be on the part of the American people. At the same time, complacency must not enter into our attitude toward our government. Never forget that the elected representatives of the people are dependent upon the citizens to assist them in the exercise of their voting privileges.

American medicine has never had a more golden opportunity to exercise leadership than during this period of transition. Leaders in medicine must look forward, not backward. They must realize that the public has a stake and interest in medicine's problems. Above all, the individual physician must realize that, largely through his scientific knowledge and his art in the practice of medicine, together with his acceptance of his civic responsibilities, the public will judge medicine's challenge to the future.

Let none of us be caught short.

L. C. Kuykendall

President.

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ASSOCIATION ACTIVITIES

POSTGRADUATE COURSE
GYNECOLOGY, FEBRUARY 3

On February 3, 1947, the postgraduate course in Gynecology will be initiated in the northeastern part of the state. Announcement letters pertaining to this course have been mailed to each doctor in this district. The Postgraduate Committee is more than enthusiastic over obtaining Dr. J. R. Bromwell Branch as our instructor for the coming two years.



J. R. Bromwell Branch, M.D., F.A.C.S.

Dr. Branch is a gentleman of unusual basic training, almost continuous postgraduate study, years of clinical experience and has proven to be an excellent teacher.

Every doctor should appreciate the fact that this course, like previous courses, could not be offered without the liberal financial assistance of The Commonwealth Fund of New York and the Oklahoma State Health Department. A lesser part of the financial support is furnished by our own Association.

Following is listed the qualifications of the instructor and a brief outline of the course as it will be taught:

Date of Birth: February 28, 1883. Pre-Medical Training: A. B., 1904, Johns Hopkins University. Medical School: M.D., 1908, Johns Hopkins Medical School. 1908-09: Resident House Officer; Gynecological Service, Johns Hopkins Hospital. 1909-10: Resident Surgeon, including Gynecology, Macon Hospital, Macon, Georgia. 1910-15: Attending Gynecologist, while in private practice, Macon Hospital, Macon, Georgia. (One month each year spent in the gynecological clinic of Drs. Kelly, Cullen and Hunner.) 1915-27: Practiced and taught Gynecology as well as Surgery. Hunan — Yale Medical School, Changsha, Chiua. 1921: During the summer attended aud assisted in teaching a six weeks postgraduate course in Gynecology with Professor J. Preston Maxwell at the Peking Union Medical College in Peking. 1923 24: Year of furlogh — study in Gyuecological Clinics at Hopkins, Mayo Clinic, and others in Chicago and Buffalo, N. Y. Summer of 1924 toured Europe for study in Gynecological Clinics of Edinburgh, Belfast, Dublin, London and Paris, under Rockefeller Foundation Fellowship. 1928-40: Same arrangement as foregoing in Department of Surgery, National College of Medicine, Shanghai, China. 1933: Two mouths in the gynecological clinics at Johns Hopkins with Navak and others. Also at the Tumor Clinic, University of Maryland, Baltimore. 1941-42: Attending Gynecologist, Macon Hospital, Macon, Ga., with private practice limited to Gynecology. 1943-44: Instructor in Surgical Diagnosis for the state of Tennessee; December, 1944: refreshed month in New York and Baltimore Gynecological Clinics. 1945-46: Instructor in Gynecology for the state of Tennessee.

Lecture No. 1. The Importance of a Complete History, and Study of the Patient As a Whole; No. 2. Pediatric Gynecology; No. 3. Menstrual Abnormalities: General Factors Influencing the Menstrual Function; No. 4. Gynecological Endocrinology; No. 5. Congenital Deformities or Anomalies; No. 6. Infections; No. 7. Leukorrhea: Pelvic Inflammatory Disease; No. 8. Tumors; No. 9. Disturbances in Sexual Life: Frigidity, etc.; No. 10. Roentgenography.

MEDICAL RESEARCH — IMPORTANT ANNOUNCEMENT

The project of the Oklahoma Medical Research Foundation came definite'y nearer realization on August 28, 1946, when articles of incorporation were filed with the Secretary of State and when a charter for a corporatiou to operate on a non-profit basis was issued in the name of that group. Immediately following, those who had beeu instrumental in advancing the project met and orgauized with the following officers and board of trustees:

Laymen: Ancel Earp, President; C. A. Vose, Treasurer; C. R. Anthony, Henry S. Griffing, L. C. Griffith, D. A. Harmon, Fred Jones, Robert S. Kerr, Roy C. Lytle, Moss Patterson, Waldo Stephens, Edgar C. Van Cleef, W. R. Wallace, Oklahoma City; Fred L. Dunn, Charles L. Follansbee, Ralph Talbot, Tulsa; Clyde Muchmore, Ponca City; J. G. Puterbaugh, McAlester; Doan Farr, Clinton; W. Lee Woodward, Alva; J. Frank Buck, Shawnee; H. B. Alspaugh, Duncan; Ward Merrick, Ardmore.

Professional: John H. Lamb, Secretary; Lee Emenhiser, Mark Everett, J. P. Gray, Howard C. Hopps, Everett S. Lain, W. Floyd Keller, Lewis J. Moorman, L. Chester McHenry, Henry H. Turner, Oklahoma City; Ralph McGill, James Stevenson, Fred E. Woodson, Tulsa; Paul Champlin, Enid; Henry C. Weber, Bartlesville; John Carsou, Shawnee; George Cross, Norman; William Finch, Hobart; O. C. Newman, Shattuck.

Shortly thereafter an office was opened at 208 Braniff Building and the secretarial and clerical staff installed.

To further the project of education among non-medical

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groups, a series of meetings in the major centers of Oklahoma were organized. As this edition goes to press, such meetiugs have been held in Guthrie, Chickasha, Shawnee, Duncan, Clinton, Altus, Alva, Miami, Durant, and Bartlesville. Other important centers will be visited prior to January 17. Ou that date an organized meeting to cyrstallize sentiment aud secure leadership will be held in Oklahoma City. At that time more detailed plans will be announced. The special speaker for that event will be Dr. Walter C. Alvarez, of the Mayo Clinic, Rochester, Minnesota.

During the spring months of the year au organized fund raising movemeut will get under way. It will be preceded by a number of local meetings at which outstanding scientists from all over the United States will be asked to participate and the public's attention focused on the need for and benefits from scientific research in the field of medicine. Attention will be drawn to the fact that in comparison with nearby states such as Texas and California, Oklahoma is not doing its share of such work.

An inspiriug phase of the progress to date is the interest and enthusiasm of business and professional meu outside the field of medicine in this project, which is generally regarded as a humanitarian movement and only indirectly a project for the benefit of medicine.

In seeking support of the general public, the project is placed at $1,500,000 miuimum, and $3,000,000 as the desired amount. An interested friend made the remark, "You can't do much research work for $3,000,000." The only possibly reply was made — "probably that is true, but it would make a start". And a start is the important thing at the present time.

OKLAHOMA STATE MEDICAL ASSOCIATION REPRESENTED AT MID-WINTER MEETING OF A. M. A. HOUSE OF DELEGATES AND ANNUAL SECRETARY-EDITOR'S CONFERENCE

Oklahoma Delegates James Stevenson, M.D., Tulsa, and C. R. Rountree, M.D., Oklahoma City, President-Elect Paul B. Champlin, M.D., Enid, Editor L. J. Moorman, M.D., Oklahoma City, the Executive Secretary and Associate Secretary attended the A. M. A. House of Delegates first mid-winter meeting and the annual Secretary-Editor's Conference held at the A. M. A. headquarters in Chicago, December 7th through 11th.

Overshadowing the many resolutions introduced before the House of Delegates was the presentation, in its entirety, of the Rich Report. Mr. Raymond Rich and Associated were engaged by the A. M. A. some year and one-half ago to make a complete analysis and thorough study of the A. M. A.'s public relations program and activities pertaining thereto. Many of the recommendations offered by the Rich firm have already been adopted and become effective through the actions of the A. M. A. Board of Trustees. An outstauding example of such action is the employment of the new Executive Assistant, Mr. Charles Swart. The Rich Report has not been released for publication as of this date pending further study and action by both the Board of Trustees and the House of Delegates, but it can be said that the study is most far-reaching and constructive and it is anticipated that many new improvements and betterment policies will result from this important research and analysis by experts iu the field of public relations. A detailed report was submitted to the Delegates by the proper committee pertaining to the A. M. A. Constitutiou and By-Laws to make it in keeping with changes coming out of the Rich Report analysis.

The Committee ou the Annual Meeting of A. M. A. will extend invitations to eleven foreigu countries for representation at the next annual Meeting scheduled for June 9 through 13, 1947. The president of the United States will also receive special invitation to attend and his preseuce has beeu tenatively arranged.

Secretary-Editor's Meeting December 7 and 8

Following the customary preliminaries of any conference the entire program for the first day's session of the Secretaries' and Editors' Conference consisted of many excellent and timely papers presented to the eutire group. George F. Lull, Secretary-General Manager of A. M. A. spoke on "The Activities of the A. M. A.", W. W. Bauer discussed the "State Medical Societies Participatiou in Network Broadcasting". The Secretary of the Connecticut State Medical Society, Dr. Creighton Barker, presented a paper on "The State Medical Socity and the State Government"; Dr. James C. Sargent of Milwaukee, Wisconsin, closed the morning session with his paper entitled, "The Responsibility of the Iudividual Physician".

At the afternoon session Mr. Thomas V. McDavitt of the A. M. A. spoke on "State Medical Associations and Social Security and Federal Income Taxes". One of the highlights of Mr. McDavitt's paper brought out the very important suggestion that every medical society, both county and state, should determine its status as regards social security and federal income taxes. He stressed the importance of determining the tax status rather than ignoring it.

Mr. M. L. Meadors, Director of Public Relations of the South Carolina Medical Association, spoke on the subject, "The County Medical Society" and the Editor of the Connecticut State Medical Journal, Stanley B. Weld, gave a paper on "The Cooperative Medical Advertising Bureau". This sessiou was brought to a close with Mr. Swart presenting a paper entitled "The Medical Profession and Public Relations".

The evening session of the Conference was divided into two groups; secretaries and editors. The group of secretaries had Douglas L. Cannon, Alabama State Medical Association Secretary, presiding with L. Fernald Foster, Secretary of Michigau State Society presenting a paper on "Commercial Exhibits". Dick Graham, Oklahoma State Medical Association Executive Secretary, spoke on the subject of "The Home Office of a State Medical Association". The editor group was presided over by Robert N. Nye, Managing Editor of the New England Journal of Medicine. Mr. Theodore Wiprud, Managing Editor of the Medical Annals of the District of Columbia presented a paper and discussion on the subject of a recent survey entitled "The Medical Editor Consults His Readers". Jonathan Forman, editor of the Ohio State Medical Journal, spoke on the subject "Our Concept of the Function of a State Medical Journal".

The last meeting of the Conference concerned the reports from the two sessions by their presiding officers and a finale of open forum at which all speakers and members of the conference were invited to participate.

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HAVE YOU HEARD

Dr. J. Raymond Hinshaw has received a Rhodes Scholarship, one of the 48 presented in the United States. Raymond, son of *Dr. J. R. Hinshaw* of McAlester, graduated from O. U. Medical School in 1946, where he won the Oklahoma Hall of Fame Scholarship Award and several other honors. At the present time he is interning at Strong Memorial Hospital in Rochester, New York. The Rhodes Scholarship provides for study at Oxford University.

Dr. A. E. Hennings of Tuttle was the first candidate to file for representative from District 2, Grady County, for a special election.

Dr. Catherine Brydia of Ada has been appointed to the Board of Health for a nine year term.

Formerly of Weatherford, *Dr. Noah E. Ruhl* is now residing in Oklahoma City, where he is engaged in a limited practice.

The Legion of Merit was awarded to *Dr. E. Rankin Denny* of Tulsa recently. Dr. Denny was retired from the Army with the rank of Colonel in 1946.

A Women's Auxiliary to the *Carter County Medical Society* has been organized, including wives of physicians in Carter and Love counties. *Mrs. Joseph Kelso* and *Mrs. Ray Balyeat*, officers in the auxiliary to the Oklahoma State Medical Association, assisted in the organization.

Dr. O. S. Somerville of Bartlesville retired January 1 as Medical Director for the Phillips Petroleum Company and from general practice. He had been practicing medicine in Bartlesville since 1905 and had been connected with the Phillips Petroleum Company as Medical Director since its organization in 1917. He was succeeded by *Dr. Kieffer D. Davis* as Medical Director for the company.

Dr. A. W. Stickle, Jr., has announced the opening of his office for general practice in Stillwater.

Dr. C. L. Johnson has become associated with *Dr. H. C. Weber* in Bartlesville. Before serving in the Navy Dr. Johnson was graduated from the University of Oklahoma School of Medicine.

At the Annual Banquet of the Oklahoma Memorial Association in Oklahoma City, *Dr. D. P. Richardson* of Union City was honored when his portrait was presented to the Association in a public ceremony. Dr. Richardson had previously been named to Oklahoma's Hall of Fame. The portrait is to be hung in the Historical Building.

Dr. Gordon D. Williams has moved into newly remodeled offices in Weatherford.

Dr. William Waldrop of Oklahoma City won high praise for an entry in a Red Cross contest in a Tokyo Army Hospital conducted last spring. Dr., then Captain, Waldrop's invention was a "walker" for men in leg casts which enabled patients to get out of bed sooner.

MEDICAL SCHOOL

CALENDAR — JANUARY, 1947

SURGICAL PATHOLOGIC CONFERENCES — Each Tuesday 12:00 Noon to 1:00 P. M.

MEDICAL CONFERENCES — Each Wednesday, 9:00 to 10:00 A. M.

CLINICAL PATHOLOGICAL CONFERENCE — Each Thursday 12:00 Noon to 1:00 P. M.

TUMOR CLINIC — First and Third Tuesday (January 7 and 21) 8:00 A. M. to 9:00 A. M.

UROLOGIC-PATHOLOGIC CONFERENCE — Second Tuesday (January 14) 8:00 A. M. to 9:00 A. M.

MONTHLY STAFF MEETING — Second Friday (January 10) Dinner, 6:15 P. M.

RADIOLOGIC CONFERENCE — Fourth Monday (January 27) 6:45 P. M. to 7:30 P. M.

Dr. Richard B. Ford (Med '28), died following a heart attack at his home in Corpus Christi, Texas. Dr. Ford, 48, practiced in Holdenville and Tulsa, Oklahoma, for several years before moving to Corpus Christi.

Dr. Paul Williamson (Med '46), who is interning at Denver, Colorado, was a recent visitor at the Medical School. Dr. and Mrs. Williamson are the parents of a new daughter, Paula Lee, born November 29th in Oklahoma City.

Dr. Kemp H. Dowdy (Med '40) has recently been released from military duty and has returned to Everett, Washington.

Dr. Malcolm Mollison (Med '46), a recent visitor, indicated that he is enjoying his internship at the St. Joseph's Hospital in St. Paul, Minnesota.

Dr. Edward W. A. Oehsner, Professor of Surgery, Tulane University, School of Medicine, spoke to the medical students November 26th, on "Peptic Ulcer".

Lieutenant Colonel Weldon K. Ruth (Med '33) has recently been retired from military service. According to the Journal of the American Medical Association of December 7, 1946, "The Bronze Star was recently awarded Lieut. Col. Weldon K. Ruth, M.C., U. S. Army, of Okeene, Oklahoma, who 'performed meritorious and heroic services from April 10 to 22, 1942, during the march of captured Americans from Bataan Province to Japanese concentration camp near Capas, Tarlac, Philippine Islands.' Lieutenant Colonel Ruth was cited for disregarding his own condition and risking brutalities and death at the hands of the Japanese by continually attending his sick, exhausted comrades. He prevented the murder of two officers on separate occasions by interposing his body between them and enemy soldiers until he could revive them enough to continue the march. Lieut. Col. Ruth's ministrations did much to alleviate the suffering of his fellow prisoners of war." Dr. Ruth graduated from the University of Oklahoma School of Medicine, Oklahoma City, and entered the service December 7, 1936.

Dr. Ardell Nichols Taylor was appointed Assistant Professor of Physiology October 1, 1946. Dr. Taylor received his Ph.D. at the University of Texas in 1943.



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HITS, RUNS, ERRORS

NOVEMBER 21: An afternoon session with the Annual Meeting Committee on some problems for 1947. A chiropractor friend (?) calls to report another chiropractor who is writing prescriptions. Wants Medical Board to do something about it, and as my Dad used to say, "to think they shot Abe Lincoln".

NOVEMBER 22: Lunch with Dr. Burton and Warren Humphries and again the subject is the ad copy. The Committee will meet Sunday December 1. Over to the State Hospital meeting for a once over and from there to the state meeting of the Health and Accident Agents, finally to the office to work.

NOVEMBER 23: Plans made to go to Norman for another go round concerning hospital care for veterans.

NOVEMBER 24: Two meetings today, one of Crippled Children's Committee, and the other Scientific Work Committee. Fine attendauce at both and lots o fwork accomplished. More about this later.

NOVEMBER 25: Scheduled for an Editorial Board Meeting in Shawnee with Dr. Eugene Rice but the snow and sleet canceled the trip.

NOVEMBER 26: To Tulsa with Fondren and to meet the president, Dr. Kuyrkendall, then to a meeting of the Board of Trustees of the County Society concerning the Annual Meeting. Most of the problems have been worked out.

NOVEMBER 27: Correspondence on Annual Meeting to get confirmation of promised reservations at hotels in writing. Announcement and invitation letters sent to prospective exhibitors on Annual Meeting.

NOVEMBER 28: Thanksgiving. Office closed.

NOVEMBER 29: Working on sample questionnaire for Journal improvement campaign. Send us a note with your ideas for a better Journal.

NOVEMBER 30: Committee on Public Policy meeting tomorrow to review next three series of newspaper ads. Gathering material to present to Committee.

DECEMBER 2: To Duncan with Drs. Rountree and Gray and Mr. Frankenburg to help along the cause of the Oklahoma Research Foundation. Fine meeting and we were the guests of Dr. Alspaugh.

DECEMBER 3: To Rotary and then to a statewide mass meeting to formulate a Mental Hygiene Association. Discussion with local Pharmaceutical Association concerning the providing of drugs for veterans. It's a mess.

DECEMBER 4: Consternation and confusion reign in the office because tomorrow we leave for mid-winter meeting of A. M. A. and all our omissions and errors have to be corrected in one day.

DECEMBER 5: Long distance call received from Dr. Bailey in Stroud and we got some matters straightened out. Leave on the Frisco at 12:45 P. M. for Chicago.

DECEMBER 6 to 12: The cats (Graham and Fondren) are away to Chicago. The mice (Taylor, Tucker and Ramsey) no doubt are playing. An outstandiug A. M. A. House of Delegates meeting and Secretaries-Editors Conference. The Rich Report modernizes the A. M. A. and everyone is pleased. Delegate Rountree ends up on the Public Health Refereuce Committee. Oklahoma is represented by Drs. Champlin, Moorman, Stevenson, Rountree and Drs. Ewing and Osborn were present to help the A. M. A. and attend to their own Medical Board business.

DECEMBER 13: Caught up with the mail and had a long sessiou with Dr. Burton on the ads and special assessment.

DECEMBER 14: Interviewed applicants for one of the secretarial positions. It's hard to find journalistic experience combined with shorthand. Telephone session with Dr. Floyd Keller on Medical Examiner Bill. Dr. Moorman was excellent on the N.B.C. radio program, "Doctors — Then and Now".

DECEMBER 16: Talked to Dr. Matt Connell in Picher concerning a physician being trailed by the Medical Board of Examiners. The President, Dr. Kuyrkendall, authorized a meeting of the Executive Committee of the Council and work on the 1947 program will soon begin.

DECEMBER 17: Was scheduled to go to Idabel but meeting postponed until January 14th. More trouble on veteran medical care plan and letter goes to Committee for advice.

DECEMBER 18: Ballot on change in Annual Meeting goes to Delegates, the outcome is anxiously awaited. Conference with Bill Harkey, Attorney for Medical Board, and Walter Gray, attorney for Osteopathic Association. Latter extremely interesting. More about this later.

DECEMBER 19: Dr. Moorman review results of survey on the Journal. The comments were helpful and Editorial Board will act upon them. Need more help of this sort.

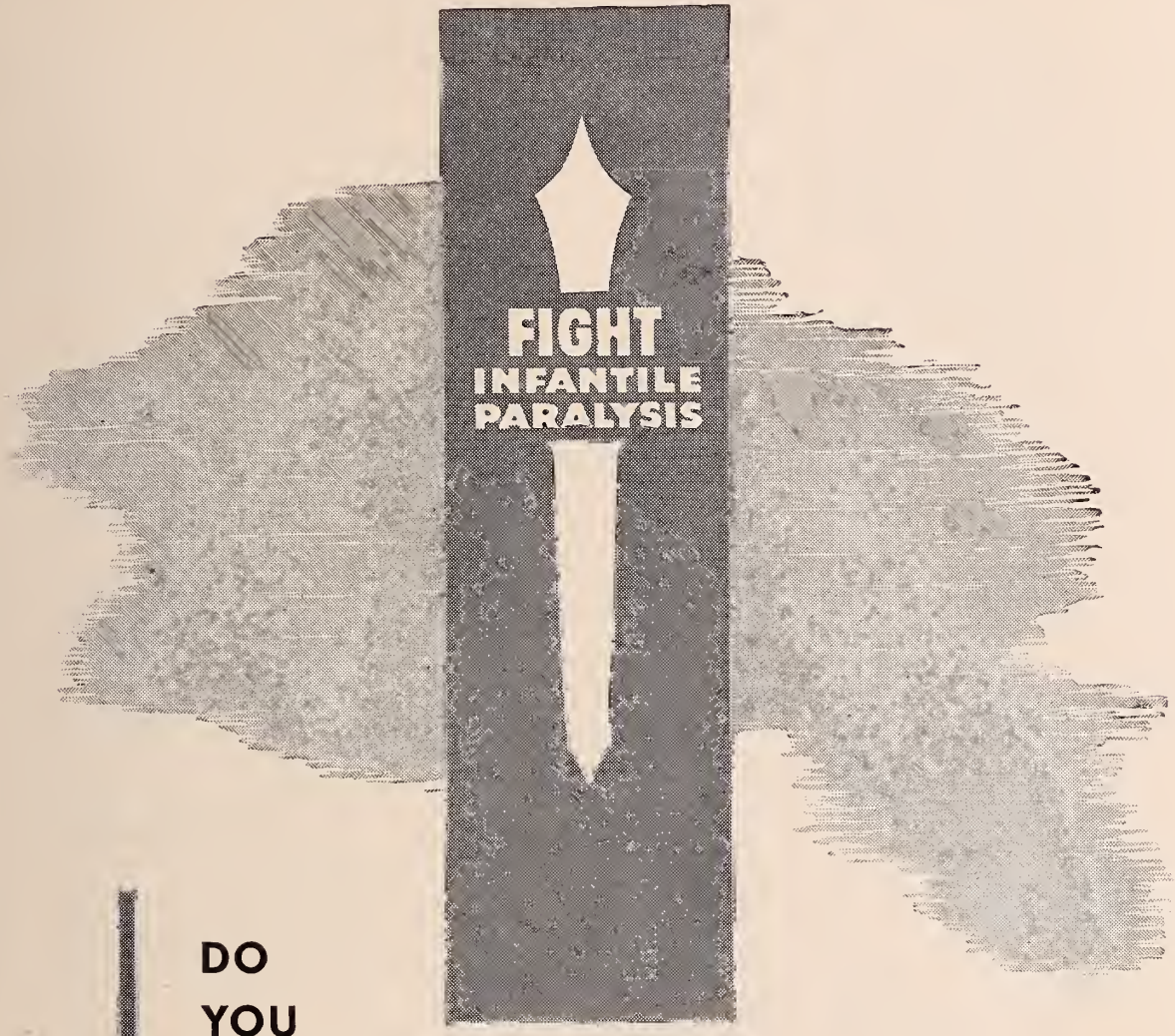
DECEMBER 20: Dr. Tisdal is in and a meeting is planned to discuss work of his A. M. A. Committee ou conservation of medical personnel should there be another national emergency. W. G. Skelley of Tulsa was elected head of Oklahoma Division American Cancer Society.

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MEDICAL ABSTRACTS

DIAGNOSIS AND MANAGEMENT OF UTERINE CARCINOMA AND SARCOMA. L. C. Scheffey, M.D. Surgical Clinics of North America, Vol. 25, p. 1262. 1945.

A review of pelvic malignancies is presented. The author notes that carcinoma of the cervix is no respector of the so-called cancer age, and that 27 per cent of cancer patients seen at the Jefferson Clinic, Philadelphia, were under 40 years of age. He advocates the use of biopsy on all suspicious lesions, and the necessity, in many cases, of splitting the cervix for a more careful inspection. The vaginal smear technique is used in his clinic, but it is admitted that a long period of training is necessary before one can be proficient in identifying abnormal cells which are characteristic of malignancy.

The author reviews the management of carcinoma of the cervix, and compares the results obtained from use of the radical Wertheim operation with those obtained from irradiation. He quotes statistics from many clinics which have used one or both methods, and concludes that irradiation is the treatment of choice in the great majority of cases. In the Jefferson Clinic the survival rate, based on a five year follow-up, was 47 per cent for early cases and 23.5 per cent as an over-all rate. The technique employed at the Clinic is discussed in detail and the use of deep roentgen rays through four external ports, combined with the transvaginal port is favored. A massive dose treatment with radium follows the deep x ray treatments.

The occurrence of carcinoma in the cervical stump following supravaginal hysterectomy is estimated at approximately 1 per cent, and the treatment of choice is irradiation. Carcinoma of the cervix in association with intrauterine pregnancy is noted as a combination of rare occurrence, with an estimated incidence of one case in 10,000 pregnancies. The use of biopsy is recommended, and precedence is given to management of the carcinoma over the possibility of obtaining a live baby.

The incidence of carcinoma of the fundus in patients under 40 is rare, and figures from the Jefferson Clinic place their average age at 59. The use of natural and synthetic estrogens in the management of symptoms of the menopause has frequently confused the diagnostic picture in postmenopausal bleeding, and stress is placed on the fact that diagnostic curettage is necessary when bleeding occurs. The author's management of fundal carcinoma is preliminary radiation followed by total hysterectomy and extirpation of the adnexa in every patient who can tolerate surgical procedures.

It is estimated that sarcoma of the uterus occurs in approximately three per cent of all uterine malignancies. The treatment and prognosis is generally accepted to be unsatisfactory.—G.P.

THE TREATMENT OF CONVERGENCE DEFICIENCY. Sheila Mayou. British Journal of Ophthalmology. Volume 30, pp. 354-370, June, 1946.

Some patients with eyestrain can be relieved of their symptoms by the correction of their refractive errors with a permanent recovery; in others, who have a true convergence deficiency, the recovery will be only temporary. Eyestrain is due to various conditions such as defective muscle balance, defective binocular vision, uncorrected errors of refraction, or to convergence deficiency.

Convergence deficiency is a very frequent cause of eyestrain, and, as the author shows, more than 70 per cent of such cases can be successfully treated by orthoptic exercises. It is thought that the symptoms caused by close work, which are not due to a muscle imbalance or any refractive error, are caused by suppression. The patients can be treated, therefore, by antisuppression exercises with success, and when the area of suppression has been overcome the binocular abductions and adductions are increased to their normal range.

The patient can be taught to converge voluntarily. To do this the patient is made to look at any object in front of him, and is taught to converge both eyes equally without effort. This usually causes homonymous diplopia which the patient should be able to maintain for a few seconds before letting the two images merge into one. Once the patient knows what is wanted and is able to do it easily, his symptoms will disappear. It is the author's experience that the average person, provided he has normal muscular balance and is prepared to cooperate and concentrate on his treatment, can be taught voluntary convergence in seven half-hour periods and can be freed, probably for ever, from the distressing symptoms which convergence deficiency can cause.

The most usual symtoms of which patients complain are headaches, either during or after working hours, or nausea, giddiness and occasional diplopia; other common symptoms are sore eyes and dry lids, a feeling of grit on the eyes, or a drawing feeling or acute pain in one or both eyes. Some patients find themselves unable to read in comfort or to sew for any length of time. Others may be unable to go to a cinema or ride in a car, bus or train without discomfort.

Some convergence deficiencies are of traumatic origin. Any severe blow to the head may be sufficient to cause the symptoms. A few patients may have also migraine; they also can gain alleviation of their sickness from treatment of convergence deficiency.

Even those patients who have orthophoria and can actually converge may benefit from treatment, while many patients with small refractive errors are able to dispense with their correction after they have been treated.

The treatment can be quick and effective but must be taken under trained supervision. The psychological element is often present in these convergence deficiencies, and particular attention must be paid to the patient's mental approach both before and during treatment since successful remedy lies largely in his own hands.—M.D.H.

MASTECTOMY FOR GYNECOMASTIA THROUGH A SEMICIRCULAR INTRA-AREOLAR INCISION. Jerome P. Webster, M.D. Annals of Surgery. Vol. 124; No. 3; pp. 557-575. September, 1946.

This is an excellent article written upon a condition that is quite often seen in general practice.

"The indications for corrective therapy for gynecomastia are discussed with emphasis on the importance of overcoming the psychic trauma caused by the female appearance of the male breast. Of the various therapeutic measures that have been advocated, operation offers the most satisfactory result. Extra-areolar incisions for removal of breast tissue leave scar deformities that indicate operative interference; therefore, such procedures fail to attain the best psychologic results."

The author reviews previous methods of mastectomy and then presents his method. This is well explained by both photographs and explicit drawings.—J.F.B.



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SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

OFFICERS OF COUNTY SOCIETIES, 1947

COUNTY	PRESIDENT	SECRETARY	MEETING TIME
Alfalfa	W. G. Dunnington, Cherokee	L. T. Lancaster, Cherokee	Last Tues. each Second Month
Atoka-Coal	J. B. Clark, Coalgate	J. S. Fulton, Atoka	
Beckham	P. J. DeVanney, Sayre	J. E. Levick, Elk City	Second Tuesday
Blaine	W. F. Bohlman, Watonga	Virginia Curtin, Watonga	Third Thursday
Bryan	W. K. Haynie, Durant	Jonah Nichols, Durant	Second Tuesday
Caddo	P. H. Anderson, Anadarko	Edward T. Cook, Jr., Anadarko	Third Thursday
Canadian	G. L. Goodman, Yukon	W. P. Lawton, El Reno	Subject to call
Carter	J. Hobson Veazey, Ardmore	J. Hobson Veasey, Ardmore	Second Tuesday
Cherokee	P. H. Medearis, Tahlequah	R. K. McIntosh, Jr., Tahlequah	First Tuesday
Choctaw	Floyd L. Waters, Hugo	O. R. Gregg, Hugo	
Cleveland	James O. Hood, Norman	Phil Haddock, Norman	Thursday nights
Comanche	Wm. Cole, Lawton	E. P. Hathaway, Lawton	
Cotton	G. W. Baker, Walters	Mollie Scism, Walters	Third Friday
Craig	Lloyd H. McPike, Vinita	J. M. McMillan, Vinita	
Creek	O. H. Cowart, Bristow	F. H. Sisler, Jr., Sapulpa	Second Tuesday
Custer	Ross Deputy, Clinton	C. J. Alexander, Clinton	Third Thursday
Garfield	Bruce Hinson, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	M. E. Robberson, Jr., Wynnewood	John R. Callaway, Pauls Valley	Wednesday before Third Thursday
Grady	Roy Emanuel, Chickasha	Rebecca H. Mason, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	F. P. Robinson, Pond Creek	
Greer	J. B. Lansden, Granite	J. B. Hollis, Mangum	
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis	First Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams, McCurtain	
Hughes	Victor W. Pryor, Holdenville	L. A. S. Johnston, Holdenville	First Friday
Jackson	E. W. Mabry, Altus	J. P. Irby, Altus	Last Monday
Jefferson	F. M. Edwards, Ringling	J. A. Dillard, Waurika	Second Monday
Kay	L. G. Neal, Ponca City	J. C. Wagner, Ponca City	Second Thursday
Kingfisher	John W. Pendleton, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	Wm. Bernell, Hobart	J. Wm. Finch, Hobart	
LeFlore	S. D. Bevill, Poteau	Rush L. Wright, Poteau	
Lincoln	J. S. Rollins, Prague	Ned Burleson, Prague	First Wednesday
Logan	James Petty, Guthrie	J. E. Souter, Guthrie	Last Tuesday
Mayes	L. C. White, Adair	V. D. Herrington, Pryor	
McClain	S. C. Davis, Blanchard	W. C. McCurdy, Purcell	
McCurtain	J. T. Moreland, Idabel	R. H. Sherrill, Broken Bow	Fourth Tuesday
McIntosh	F. R. First, Checotah	W. A. Tolleson, Eufaula	First Thursday
Muskogee-Sequoyah			
Wagoner	W. P. Fite, Muskogee	William N. Weaver, Muskogee	First Tuesday
Noble	A. M. Evans, Perry	Jesse W. Driver, Perry	
Okfuskee	W. P. Jenkins, Okemah	M. L. Whitney, Okemah	Second Monday
Oklahoma	W. F. Keller, Okla. City	John H. Lamb, Okla. City	Fourth Tuesday
Okmulgee	F. S. Watson Okmulgee	C. E. Smith, Henryetta	Second Monday
Osage	E. C. Keyes, Hominy	Vincent Mazzarella, Hominy	Third Monday
Ottawa	C. F. Walker, Grove	W. Jackson Sayles, Miami	Second Thursday
Pawnee	H. B. Spaulding, Ralston	R. L. Browning, Pawnee	
Payne	F. Keith Oehlschlager, Yale	C. W. Moore, Stillwater	Third Thursday
Pittsburg	Millard L. Henry, McAlester	Edward D. Greenberger, McAlester	Third Friday
Pontotoc-Murray	E. D. Padberg, Ada	Ollie McBride, Ada	First Wednesday
Pottawatomie	Charles F. Paramore, Shawnee	Clinton Gallaher, Shawnee	First and Third Saturday
Pushmataha	John S. Lawson, Clayton	B. M. Huckabay, Antlers	
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	Third Wednesday
Seminole	Clifton Felts, Seminole	Mack I. Shanholz, Wewoka	Third Wednesday
Stephens	Everett King, Duncan	Fred L. Patterson, Duncan	
Texas	Daniel S. Lee, Guymon	E. L. Buford, Guymon	
Tillman	H. A. Calvert, Frederick	O. G. Bacon, Frederick	Second and Fourth Monday
Tulsa	E. O. Johnson, Tulsa	John E. McDonald, Tulsa	
Washington-Nowata	Ralph W. Rucker, Bartlesville	L. B. Word, Bartlesville	Second Wednesday
Washita	L. G. Livingston, Cordell	Roy W. Anderson, Cordell	
Woods	C. A. Traverse, Alva	O. E. Templin, Alva	Last Tuesday Odd Months
Woodward	Myron England, Woodward	C. W. Tedrowe, Woodward	Second Thursday Even months

THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

PHYSICIAN AND SURGEON

Do you remember having seen this combination on the doctor's shingle at the turn of the century? In a broad sense it is unfortunate that this designation is passing. But with present educational methods and the grand marathon with national boards of certification as the goal, young doctors are led to the false conclusion that there is not time for experience in general practice. Service in hospital wards is not comparable to practice in the homes of the people. No doctor can be universally adequate in both the art and science until he has encompassed society and studied the cross section from hovel to mansion.

When Harvey Cushing, in 1922, gave his presidential address before the American College of Surgeons on "The Physician and Surgeon," he introduced his discourse by a quotation from Lanfranc: "Why in God's name in our days is there such a great difference between the physician and the surgeon? . . . It ought, however, to be understood that no one can be a good physician who has no idea of surgical operations, and that a surgeon is nothing if ignorant of medicine. In a word, one must be familiar with both departments of medicine." Though these words preceded the printing press, the separation of medicine and surgery was troubling Cushing when he spoke to his fellow surgeons on this occasion.

Since Cushing's warning, we have widened the breach between the physician and the surgeon, and the gaping chasm has confused the public. There must be a happy medium between the indiscriminate referring of patients for highly specialized services. The good physician should see the patient as a composite whole — mind and body — and comprehend his needs. Having met this obligation with diagnostic skill, he will employ wise discrimination and sane therapy, including the aid of the specialist when conditions demand. There is a great satisfaction in being able to tell the specialist what is going on and why the patient is being referred. It is worthwhile to remember that in the end comprehensive knowledge and diagnostic skill are remunerative. The medical student who hurries through school, secures his degree, and scrambles for certification in a specialty with no experience in general practice, stands a fine chance of missing the mark. He may know diseased conditions in his narrow field but he will never comprehend their full significance. He will never know his patient as well as his patient knows him. The doctor who does not probe his patient's soul until he hits paying dirt is a failure. His penetrating knowledge must come as a surprise to the patient and thereby inspire great faith and confidence. This is not a gift from the gods, but an art based upon experience in all walks of life.

It is through general practice that we get at the matrix of human nature. It is the key to successful specialization. The young doctor is urged to try it. As life proceeds, even though specialization is ultimately sought, the time will not be missed. Borrowed money can be repaid, but opportunity thrown to the winds cannot be retrieved. Don't be afraid of work. A great medical philosopher has said that the iron in your crown is more valuable than the gold. Whether you succeed or not, in silent hours as age comes on there will be sad moments if you miss the stimulating experience of general practice.

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THE STATE MEETING

The next meeting of the State Medical Association will convene in Tulsa May 13 to 15. It is not too early to make plans. All officers and committees should be actively engaged in the performance of their duties and they should have the full cooperation of every member of the Association.

Those who are invited to participate in the program should make prompt decisions in order that the building of a creditable program may be expedited. Those who agree to appear on the program should remember that the manuscript ultimately will come to the Editorial Board where it will be considered for publication. The Editorial Board would like to approve every manuscript for the Journal but Oklahoma's medical rating at home and abroad is largely dependent upon the scientific quality of the Journal. Obviously it is the duty of the Editorial Board to set reasonable standards and to see that they are met.

Many of the manuscripts accepted for publication must be made to conform to the established policies and standards through careful editing. Some must be abbreviated, but when changes are made the editors are careful not to alter the character or meaning of the scientific content. Such alterations are not to be construed as a reflection upon the author.

Since the space for scientific material is limited occasionally it becomes necessary for the Board to choose the most suitable manuscripts and leave some unpublished. This choice is based chiefly upon the Board's judgment of scientific and clinical values. Always the essayist may count on the generous cooperation of the Board.

Those who are preparing manuscripts may find helpful suggestions under the Journal masthead, opposite the table of contents. Dr. Samuel Johnson once said, "Give nights and days, sir, to the study of Addison, if you mean to either be a good writer, or what is more worthy, an honest man." It would be much easier and perhaps immediately more helpful to read *The Art of Plain Talk*[1] *by* Rudolf Flesch. Flesch is also the author of *Marks of Readable Style.*

(1) The Art of Plain Talk. Harper and Brothers: New York. 1946.

MEDICINE AND SELF-DISCIPLINE

In Theognis' book *Sayings to Cyrnus,* we find the following significant statement: "I have given you wings, Cyrnus, with which you will fly over land and sea. . . . At every feast and revel you will be on the lips of many a guest . . . and when you have gone down to the dead you will still wander through the land of Greece and the islands of the sea. . . ." Being warned against the treachery, deceit, and the wiles of the ignoble, the boy is urged to distinguish himself from the mob by truly noble self-discipline and behavior.

To the worthy student of medicine, Aesculapius says: "I have given you wings with which you will fly over the land and the sea where suffering humanity needs not only the elevating culture which Cyrnus sought, but the comfort and healing which medicine brings when it comprehends both the art and the science." True sons of Aesculapius will practice self-discipline and noble behavior. They will strive to uphold the honor of the high calling they have championed. Like Greek sculptors and poets depicting Olympian victors, they will strive for perfection within the ideal. They will not work for gain, but for the sake of service; for the coveted privilege of living in the hearts of their patients and with the hope of augmenting the good name of their profession as they "go down to the dead."

Success in medicine requires a religious comprehension of its purposes, opportunities, and responsibilities. The youth who is not willing to wring soul-torturing sweat from his vitals should not enter upon the study of medicine.

RESEARCH

What more can be said in these columns about research? Only this — research means sacrifice, often even unto death, for the benefit of humanity. Those who doubt should read *Banting's Miracle* by Seale Harris.[1] Few if any of the readers of this editorial will have the opportunities of the research worker. They must find some other way to serve. The truest service has the flavor of sacrifice. Give something to the Oklahoma Research Foundation even though it cuts to the quick. Such wounds always heal and the scars grow more honorable as time passes.

1. Harris, Seale: Banting's Miracle. Philadelphia: J. B. Lippincott. 1946.

There is more self love than love in jealousy.—*La Rochefoucauld.*

A jest loses its point when he who makes it is the first to laugh.—*Schiller.*

Joy is more divine than sorrow; for joy is bread and sorrow is medicine.—*Henry Ward Beecher.*

SCIENTIFIC ARTICLES

THE SURGERY OF DEAFNESS DUE TO OTOSCLEROSIS*

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OKLAHOMA CITY, OKLAHOMA

It has been known for a long time that opening the labyrinth of a person suffering with deafness due to otosclerosis resulted in a temporary increase in hearing. Years ago Jenkins[1] and Baranay[2] and more recently Holmgren[3] and Sourdille[4] attempted to relieve deafness in cases of otosclerosis by making a fenestra in the bony capsule of the labyrinth. Sourdille performed his operations in three stages at intervals of four or five months. But it was Lempert[5] who perfected and popularized the operation. It was he who introduced the endaural, antauricular, extracartilaginous approach to the temporal bone and it was he who applied it to the fenestration of the labyrinth. He likewise never ceases in his struggle for improvement in operative results and consequently there are periodic changes in technique which in the long run are bound to result in advancement. But now there are many others, both in our country and abroad, who are performing this type of surgery and who will help to evaluate the operation and perhaps even contribute to its improvement.

There are, broadly speaking, two types of deafness, conductive deafness and perceptive deafness. Anything which interferes with the transmission of sound waves from the auricle through the external canal, membrana hympani and ossicles and middle ear to the cochlea is known as conductive or obstructive deafness. Anything which interferes with the transmission of sound waves from the cochlea to the auditory center in the brain is known as perceptive or nerve deafness.

Otosclerosis is a term used to describe a pathological change within the bony capsule of the labyrinth which consists of circumscribed, sharply defined, inlaid bony tumors. This types of pathological change has been found in routine autopsy examination of persons who were never known to have been deaf, such change being chiefly located in the region of the oval window, round window, cochlear capsule and fundus of the internal auditory meatus. As long as the lesion remains confined to the bony labyrinthian capsule, the individual has no symptoms of deafness, but once the otosclerotic tumor spreads beyond the endosteal or periosteal layer of bone forming the labyrinthian capsule in the region of the oval window, resulting in ankylosis of the footplate of the stapes, deafness ensues. The deafness which results from the pathological change known as otosclerosis is due to a fixation of the stapes in the oval window which in turn interferes with the transmission of sound waves to the cochlae. This places it in the category of conductive deafness. Lempert[6] suggests, that, from the scientific standpoint, the otologist has no right to refer to this form of deafness as otosclerosis unless he has histologic proof of the presence of the otosclerotic lesion, and suggests that we call it Clinical Otosclerosis which signifies that the deafness is suggestive but not positive evidence of the presence of otosclerosis.

Patients suffering from Clinical Otosclerosis often give a family history of deafness. They have a deafness for air-borne sound which is gradually or rapidly progressive, and involves the lower frequencies first but ultimately involves all frequencies. It usually begins early in life and is most frequently first noticed during the second decade of life, though it may be noted earlier or later. The hearing by bone conduction is prolonged over and above the hearing by air conduction. Such patients frequently hear better in noisy places than in quiet places. Tinnitus is a

*Presented at the Annual Meeting of the Oklahoma State Medical Association before the Section on Eye, Ear, Nose and Throat, May 1, 1946.

common complaint and may be either unilateral or bilateral, mild or severe, intermittent or continuous. Inflation of the eustachian tube does not produce improvement in hearing and the tubes are found to be patent. The tympanic membranes are often atrophic and extremely translucent, and in the more severe cases the mucous membrane lining the promontory of the cochlea may be seen as a pinkish hue shining through the membrana tympani. The hearing for bone conducted sound may remain near normal even though the hearing for air conducted sound may be down to the sixty or eighty or one-hundred decibel loss level.

There are, of course, great variations in this clinical picture of otosclerosis, but there are certain requirements which must be met before surgery can be considered. For example, the patient may have Clinical Otosclerosis but he may have sufficient cochlear degeneration as indicated by lowered bone conduction to make him an unsatisfactory subject for the operation. Therefore, before the fenestration operation can be considered, a diagnosis of Clinical Otosclerosis must be made. The hearing for conversational voice must be beyond the serviceable level which in terms of audiometric reading is below the thirty decibel level. The middle ear must be free of all infection and the drum must be intact. There must be reason for the otologist to suspect that within the ear selected for operation there still exists a reservoir of cochlear nerve function which is sufficient to permit improvement of hearing as a result of improving the air conduction mechanism by surgery.

The fenestration operation, then, is not designed to cure deafness or even to cure one particular type of deafness. It does not even attempt to remove the pathological lesion causing the deafness. It merely takes advantage of the fact that in a number of otosclerotic patients cochlear degeneration has not yet taken place and a new window can be made into the internal ear through which sound may again reach the cochlea which still has enough ability to function as to be able to return serviceable hearing to its owner. In this manner the old functionally impeded conducting mechanism is bypassed and a new sound conducting mechanism is substituted to carry sound waves to the cochlea.

The operation itself is a highly technical procedure which is performed through the endaural, antauricular, extracartilaginous approach. It requires special instruments, a specially trained operating team, and an entirely new concept of temporal bone surgery. In the performance of the operation the mastoid air cells are exonterated thoroughly, the attic is entirely exposed, the bony external auditory canal wall is removed from the membranous canal wall without damage to the latter, the upper portion of the annulus tympanicus is removed, the semicircular canals are skeletonized, the incus and head of the malleus are removed, the corda tympani nerve and stapes are exposed and of course, the facial nerve is plainly visible at all times in the thin bony covering of its horizontal portion from the region of the geniculate ganglion to the beginning of the vertical portion. The tympanic membrane is mobilized and a tympanomeatal flap is formed from the delicate skin of the external auditory canal wall which is still attached to the membrana tympani. When all this has been carefully and successfully done and the exposure is adequate and the horizontal canal and its ampulla is clearly defined along with the ampulla of the superior semicircular canal, the fenestration may be performed. This new window is made in the ampullated end of the horizontal semicircular canal which is also called the surgical dome of the vestibule. The fenestra must be made under magnification with very gentle strokes of fine polishing burrs. When the perilymphatic space is finally opened, the membranous horizontal semicircular canal may be seen as a fine transparent slender tube whose ampullated end dips inward to join the utricle of the vestibule. The new fenestra is separated from the oval window, containing the ankylosed footplate of the stapes, only by the horizontal portion of the facial nerve. During the fenestration the cavity must be kept meticulously free and clean of bone dust and bone chips. The new window is then covered by Shrapnels Membrane by laying the tympanomeatal flap so as to cover the attic and lay into the mastoid cavity, thus drawing Shrapnels Membrane over the newly created fenestra.

The results obtained from such a surgical procedure are at best imperfect. But if there exists in the operated ear a sufficient reserve of cochlear function to raise the hearing within the speech range above the thirty decibel loss level, the hearing is then restored to the practicable serviceable level and the patient can again hear without a hearing aid and voices and sounds are more normal than with a hearing aid. If one patient has a hear-

ing loss within the speech range of fifty decibels in the ear to be operated and gets an improvement of twenty-five or thirty decibels from the operation, he will have practical serviceable hearing restored. But, if another patient has a loss within the speech range of eighty decibels and receives an improvement of twenty-five or thirty decibels from the operation, he will not have practical hearing restored. He may then, however, continue to wear his hearing aid in his unoperated ear.

The two most frequent causes of imperfect results from this procedure are inflammation of the endolymphatic labyrinth and bony regeneration which tends to close the fenestra. Observation of signs and symptoms suggests that all patients undergo a post-operative labyrinthitis which subsides within a period of two or three weeks. The majority of patients recover from this without any permanent damage to the membranous labyrinth, but there are a few who never recover the hearing improvement which was lost during this time, thus indicating that permanent damage did occur to the endolymphatic labyrinth in those cases.

The other factor making permanent restoration of hearing uncertain once it has been obtained, is nature's attempt to close a bony defect. Nature will attempt to close this new window and may do so within a few months to a year or a year and a half. Appropriate steps are taken in each case to minimize the severity of the labyrinthitis and to reduce the changes of bony regeneration.

Complications following this type of surgery are rare. However, they do occur and may include facial paresis, purulent labyrinthitis, intracranial disease such as brain abscess or meningitis, hemorrhage into the labyrinth, and post-operative wound infection.

From the foregoing statements it is obvious that this surgical procedure does not cure the lesion causing this type of deafness although it may restore practical serviceable hearing. Even with the most careful selection of cases a number of patients will fail to regain their hearing. But there will be others whose hearing will be sufficiently restored to enable them to discard their hearing aids. When this occurs the results are far more gratifying to the patient than any benefits previously obtained by the use of the hearing aid. Furtheremore, restoration of satisfactory hearing by surgery aids in the prevention of further cochlear degeneration. Conversely, continued use of the hearing aid often lulls a patient into a false feeling of security from which he may suddenly awaken to find that his hearing aid is no longer an aid and his hearing has degenerated to the point where surgery would be of no value. His position at this stage is comparatively hopeless. Therefore, all persons who have lost practical hearing should have the benefit of examination to determine if they have a chance of having their hearing restored. If they are suitable candidates, they may be informed about the operation and allowed to decide at leisure after careful consideration whether or not they elect to undergo surgery. If the hearing is not improved, they can still use the hearing aid in the opposite ear. If the hearing is restored by surgery a new world is open to the patient and he has regained that which until recently was irrevocably lost.

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WORLD WAR II

The record made in World War II by American surgeons in their treatment of the wounded is enviable. To date the record shows that but 4.5 per cent of the wounded have succumbed. This is to be compared with a death rate of 8.26 per cent in wounded American soldiers in the American Expeditionary Forces in the first world war and a 10 per cent death rate which was recorded in wounded German soldiers during the first four years of the present war. This saving of life has been achieved primarily by the skill of American surgeons and their ability to develop rapidly the concepts which were necessary for the intelligent management of the wounded.

Few if any of the surgeons had experienced the flow of gross trauma which faced them when the battle was on and casualties began to pour in. Their conceptions respecting preoperative, operative and postoperative treatment had to be altered to fit the conditions under which they had to work. Their intellectual flexibility, their ingenuity at improvisation and their constant attention to detail in the care of the wounded provided a great tribute to the system of medical education which developed these surgeons. Their record was not equaled by that made by any other nation.

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INSTITUTIONAL TREATMENT OF SYPHILIS*

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Institutional treatment of syphilis assumes the use of relatively short and intensive methods of therapy. That intensive methods may not only render the patient quickly non-infectious, but also achieve both early serologic and clinical cure, is a well-established fact. It may be recalled that Ehrlich thought he could eliminate the infective agent of syphilis, and that Pollitzer in 1910 obtained early cures by combining large doses of salvarsan with insoluble mercury salts; that Chargin and co-workers between 1936-39 achieved cures of infectious syphilis by massive arsenical therapy through intravenous drip, and that Mahoney in 1943 first demonstrated the cure of early infectious syphilis through the use of penicillin.

During the past ten years no less than fifty modifications of intensive treatment plans have been used. In general, all early procedures were modifications of existing methods, in that massive doses of arsenic combined with bismuth were given over a shorter period of time. The introduction of penicillin added a new instrument and modified all existing plans of treatment.

Earlier methods were dangerous and required expert management. Mortality under intravenous drip was about 0.3 per cent. Hospitalization was essential. Extensive laboratory tests were necessary for pretreatment evaluation of kidney and liver function, for ruling out active pulmonary tuberculosis and blood dyscrasias, for treatment control and post-treatment observation. Much was learned about arsenicals during the early days of massive treatment. We learned that signs of toxicity appear in the latter half of the treatment period, after about six to seven hundred milligrams of mapharsen had been administered. Predominant among signs of arsenic toxicity were hemorrhagic encephalopathy, with a poor prognosis; agranulocytosis with an equally grave prognosis; and febrile reactions. Many modifications of massive arsenotherapy were tried. All presented the problem of toxicity during the latter half of treatment.

The introduction by Mahoney in 1943 of penicillin in the treatment of syphilis was a great boon to all who were engaged in the hospital management of early syphilis. Though many were reluctant to adopt any new agent, penicillin soon became an accepted antiluetic therapeutic weapon. Penicillin, like arsenic, is a potent spirocheticide, as is shown by the rapid dissolution of lesions, by the approach to seronegativity in those patients who were positive, the maintenance of negativity in those who never became positive, and in the general low relapse rate.

In 1944, arsenic and bismuth in small amounts were added to penicillin to reduce still further the possibility of relapse. A combination of these three agents provided our present method of intensive therapy, which consists of penicillin, 1,800,000 units; mapharsen, 180-300 mgm.; and bismuth subsalicylate, 600 mgm. Upward of 50,000 patients have been treated to date by this method or one quite similar. No deaths have occurred which were attributed directly to treatment. In general, the relapse rate is between 15 per cent and 20 per cent. In the near future statistics will be available to show more exactly the results obtained by this standard method.

Advantages of rapid treatment methods in the program for control of venereal disease include the practical assurance of non-infectiousness within a short time, the prevention of spread of the disease by hospitalization of the patient during the infectious period, the assurance of adequate treatment to prevent late sequelae of inadequately treated or untreated syphilis, and the educational value of the methods employed. The latter applies to both the patient and the public. In addition to these advantages, rapid treatment has emphasized the value of quantitative serologic tests and necessity of early discovery and diagnosis. Rapid treatment is safely and effectively adaptable to infant congenital syphilis and syphilis in pregnancy. Indications are that massive combined treatment will also prove effective in management of early central nervous system lues, as well as tertiary syphilis of other types.

*Presented before the Annual Meeting of the Oklahoma State Medical Association, Section on Urology and Syphilology, May 1, 1946.

Disadvantages are the loss of time and income necessitated by hospitalization, and the necessity for mass rather than individualized treatment. With use of combined penicillin, mapharsen, and bismuth, the risk to the patient is no greater than with the use of conventional treatment. In the words of Dr. Udo Wile, "The incalculable benefits of the large number of patients successfully treated outweigh all of the disadvantages."

The optimum dosage, interval between injections, and duration of treatment have not yet been determined; therefore, it does not seem advisable at this time to recommend the treatment methods employed in rapid treatment centers for use in general practice. These methods should still be considered in the developmental stage, when rigid control is essential to an intelligent interpretation of results. Hospital treatment of syphilis is a definite forward step in venereal disease control. Established strictly as a war emergency measure, it will soon take its place in some modified form as the accepted regime for treatment of all early syphilis.

Institutional management of syphilis has adapted itself remarkably to the venereal disease control problem created by the war. It is the best method of removing infected persons quickly and effectively from circulation. Lesions are rendered darkfield negative within twelve hours under this management. The patient remains in the hospital ten days and is rendered non-infectious. Infectious relapses occur most frequently at about the sixth to eighth month after treatment. Possibility of relapse emphasizes the imperative need of serologic follow-up.

In classes conducted for instruction of patients, syphilis is explained in non-technical terms. All patients are impressed with the necessity for continued observation by a physician following treatment. They are told that relapse may occur, and how to determine whether they have been cured, have relapsed, or are serologic fast. They are made to understand the meaning of quantitative tests and are shown the pattern their tests should follow.

Those who observe patients following intensive therapy should be thoroughly conversant with quantitative serologic patterns, and acquainted with the various tests employed. The simple "positive" or "negative" report is not a satisfactory criterion for adequate post-treatment serologic observation. The quantitative determination is essential to an intelligent evaluation of the patient's progress following rapid treatment, and provides the facts necessary to guide the physician in his management of the patient and his infection.

There are many quantitative tests. The Kahn, Eagle, and Kolmer probably are the most widely employed. The Kahn test is employed in following the serologic progress of our patients. The following examples will illustrate several patterns which one may expect to encounter: (1) cured case, (2) prolonged decreasing titer — secondary, (3) reinfection — retreatment, (4) sero-relapse — retreatment, (5) prolonged decreasing titer — early latent.

ANNUAL MEETING

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MYOPIA*

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OKLAHOMA CITY, OKLAHOMA

Myopia is that refractive condition of the eyes in which rays that are parallel to each other when they fall upon the eye come to a focus in front of the retina.

Such a deceptively simple definition, which we have used since the time of Kepler in 1604, gives no intimation of the complexities involved in this problem. The status of myopia is still uncertain and controversial, but possibly a survey of some of the modern conceptions may help us to organize and consolidate our thoughts to some extent.

Traditionally most myopia has been classified as *axial* or so-called *typical* myopia, in which the refractive error was thought to be due to an axial elongation of the globe. A small percentage were considered due to other factors affecting the refraction, such as changes in curvature or density of the lens, increased index of refraction of the aqueous, forward displacement of the lens, increased curvature of the cornea, and accommodative *spasms*. These types were designated *curvature myopia, index myopia*, or *refractive myopia*.

Objectively the typical myopes appear to have a protrusion of the eyes, a small or negative angle gamma, deep anterior chambers, large pupils, and degenerative changes in the vitreous and fundus. The absence of accommodative effort with consequent lack of stimulation to convergence allows a latent or manifest divergence to develop. The effort to attain distinct distant vision frequently leads to a habit of squinting or squeezing the lids. By far the most important objective changes are those which occur intraocularly. As myopia develops, the vitreous loses its normal consistency, becoming fluid and filled with floating opacities. The choroid and retina become atrophic in the region of the papilla and the macula, and in some advanced cases macular hemorrhages occur. Lens opacities and retinal detachments are not infrequent complications of advanced myopia.

Subjectively the most commonly noted symptom is indistinct distant vision. In many cases, this disability seems to trouble the myope very little. Unless distinct vision is required for some specific purpose they frequently prefer their natural, uncorrected vision to which they have become accustomed. You have probably observed experiences similar to that of the highschool girl who returned to the office recently with the observation that although she appreciated her new glasses she thought things looked nicer without them, especially her boy friend, because she could see all his freckles when she wore her glasses. So, undoubtedly, the soft haze through which the myope sees his environment may be more conducive to a pleasant existence than a sharp distance acuity.

Symptoms of asthenopia occur frequently but seldom appear to be associated with accommodative effort. Many of the symptoms are probably due to the muscular imbalance characteristic of myopes. Lack of accommodative effort for near results in a lack of the normal stimulus to convergence, and the resulting divergence with secondary convergence insufficiency makes it difficult to maintain comfortable binocular vision for near. Rapid tiring of the eyes is a characteristic of myopia. An increased sensitivity to light and susceptibility to muscae volitantes are also noted. In high degrees of myopia, diffusion circles may cause a monocular diplopia.

There is a great deal of disagreement as to the nature of myopia. The present trend is away from the traditional theory of axial elongation toward the theory of normal biologic variation. Careful investigation showed that unless a myopia is of high degree (9.00 or over), the axial length may be only one of several variable factors. It has been demonstrated in emmetropic eyes that the refraction of the cornea may vary from 37 to 48 diopters, the lens from 20 to 34 diopters and the axial length from 20 to 25 mm. Differing combinations of these variable

*Presented before the Section on Eye, Ear, Nose and Throat, Oklahoma State Medical Association, Annual Meeting, May 3, 1946.

factors may include all eyes in the refractive ranges from −9.00 to +6.00. The mathematical calculation of a curve involving these variables and an actual curve constructed from investigations made by Steiger shows that the theoretical biologic variation closely approximates the actual incidence of refractive errors. These findings led him to consider myopia as a normal physiological variant rather than a distinct process. However certain discrepancies lead us to believe that this is not the complete answer. Even though it has not provided a solution for the problem, it has evolved a method of study which has provided us with a new perspective. The principle discrepancies in the curves were a preponderance of eyes approaching emmetropia in the actual curve as compared to the more gradual leveling off in the theoretical curve and an unexplained elongation of the myopic limb of the curve. These indicate the existence of certain factors which have not as yet been considered. The degenerative changes occurring in myopic eyes point to some possible pathological process in many cases in addition to the normal physiological variation. The fact that at least 50 per cent of myopic eyes change more rapidly and to a larger degree during the period of growth indicates other factors which might be involved. At this time, it appears that a division of myopia into two large classes, one a physiologic variant and the other a pathologic process, is logical. Myopia is rarely congenital. The normal condition at birth is a variable amount of hyperopia which becomes gradually reduced during the period of growth. Myopia develops in youth and usually remains nearly stationary after growth is attained, except for the progressive or malignant type which degenerates more or less rapidly throughout life. Myopia is undoubtedly an inherited characteristic; the factor of heritage being the one outstanding etiologic factor which is undisputed. The definite predilection noted in certain racial and familial groups may be explained on a basis of heredity. The uneven distribution in various strata of society has been ascribed to overuse of the eyes for close work since it seems to occur more frequently in intellectual groups or trades such as printing, tailoring, etc., where close concentration is required. It has been suggested that an endocrine disturbance may be an etiological factor since the onset and progress of myopia are so much more marked in adolescence.

The clinical classification of myopia by Prangen is quite useful from a practical standpoint. His two main divisions are *Developmental Myopia* and *Malignant Myopia.* Under developmental are listed *Curvature Myopia* which he finds in 75 per cent of all cases and *Axial Myopia* which he finds in 20 per cent. The remaining five per cent comprising the malignant type are further subdivided into those of moderate and those of severe degree.

The multiplicity of ideas regarding the origin and development of myopia have led to innumerable therapeutic attempts. As a result of the mechanistic viewpoint of the 19th century, a system of ocular hygiene was developed which has been and is still widely used. This system involved the use of proper lighting in schools, correct posture when using eyes, large, distinct printing, regulation of the distance of near work from the eyes, restriction of the use of the eyes, and general hygienic measures relating to diet, outdoor exercise, rest, etc. Leading ophthalmologists in many countries have attempted to collect and evaluate statistics covering the last 50 years during which these measures have been in general use in the schools in order to estimate the effectiveness of these measures. The research of Segal in Munich, Ask and Nordgren in Sweden, Matos in Portugal, Heinonen in Finland and Holm in Denmark failed to furnish any conclusive evidence that the incidence of myopia had been influenced in any way. However, most men agree with Prangen that it is difficult to discount entirely the effects of excessive near work under poor hygienic conditions. Prolonged observation of individual cases gives one the impression that myopia is more apt to progress under these conditions.

Duane in 1902 stated that a full correction of the refractive error would do more to prevent the progress of myopia than any other procedure and the concensus of opinion is still in agreement with this observation. The refractive treatment of myopia has varied from the use of plus lenses to overcorrection with minus lenses. In earlier days it was thought that the use of the accomodative mechanism which becomes necessary when minus lenses are worn, elevated the intraocular tension and produced a further elongation of the globe. For this reason no glasses were prescribed or in some cases plus lenses were used to secure further relaxation of the accommodation. Cycloplegics were used to keep the accommodation inactive for long periods of time. Atropine is still used for this purpose or in just one eye to eliminate convergence. Pressure from the extra-

ocular muscles in converging was supposed to elongate the globe and increase the myopia. This theory also lead to the use of base out prisms to decrease the necessity for convergence. Tenotomies of the lateral muscles were also used to decrease the amount of pressure which they exerted on the globe.

The supposed influence of increased intraocular pressure led to the use of iridectomies in myopia in order to maintain a lower level of pressure. The use of eserine and pilocarpine for the same reason had considerable popularity for a time. At the present time the use of bifocals to lessen the accommodation is advocated in some circles.

The possible role of the endocrine glands has led to the use of powdered extract of adrenal glands, and the use of thyroid. It is felt that the use of thyroid is beneficial where a lowered metabolism is demonstrated, and it has been noted that a hypothyroidism is frequently associated with myopia. Many authorities have advocated the instillation of epinephrine in the conjunctival sac and it is probably worth a trial. The administration of calcium with parathyroid extract or Vitamin D has not been proved effective in the treatment of myopia.

The refractive treatment of myopia requires the careful estimation of the refractive error under cycloplegia. The subjective estimation of the refractive error can be quite variable. The marked tendency of myopes to accommodate frequently results in an overcorrection, and conversely, an unscrupulous refractionist may undercorrect without offending the patient since almost any glass is an improvement. In the presence of an associated astigmatic error, the subjective refraction becomes even more difficult to perform accurately. The refraction should be checked two or three times a year during the period of growth in order to keep the eyes accurately corrected at all times.

A study of the muscle equilibrium is felt by many to be of especial importance in myopes. This should include a recording of the phoria for distance and near, with and without correction, as well as prism convergence and divergence for distance and near. It is felt that any deviation of these measurements from normal limits may be used in modifying the prescription as indicated. While we are all familiar with the use of plus lenses in the treatment of accommodative, convergent squint, the modification of myopic corrections by muscle imbalances is not so widely appreciated. Dr. Costenbader of Washington, D. C., states that he sometimes overcorrects myopia as much as two diopters in cases of divergence excess and finds this overcorrection very effective in stimulating convergence at a distance. The normal exercise of a balanced accommodation and convergence apparently tends to produce the most favorable condition for healthy eyes.

The recent report from the Wilmer Institute on the results obtained in the treatment of myopia by visual training has helped to clarify the situation in regard to various therapeutic regimen which are quite popular at present. Although most of these methods have been developed by optometrists, we should know enough about them to evaluate their effectiveness and intelligently advise our patients. This has been the first controlled study on a large scale of the most effective methods devised to date and used by a group of optometrists under the direction of Dr. Skeffington.

In this group of 103 myopic individuals, approximately 60 per cent showed some increase in visual acuity, which at first glance appears rather remarkable. Careful cycloplegic refraction before and following the three month period of training failed to show any actual improvement in the myopic refractive error and the improvement in visual acuity was not consistently maintained on reexamination three months later. Although the technic of training was not described, it probably involved elimination of glasses and training in recognition with the tachistoscope, an instrument devised for teaching recognition in the military services. This is a modified projector which exposes images for definite, regulated periods of time, gradually decreasing the length of exposure until recognition becomes instantaneous. Remarkable facility in recognition of images can be developed with this instrument and the improvement in visual acuity can be attributed to education in the correct interpretation of blurred visual images. The considerable variation in visual acuity of persons with identical refractive error is attributed to personal factors of interest, intelligence, etc., since it can easily be demonstrated that a small amount of effort and education will improve visual acuity one or two lines on the chart. However, most of the patients showed a beneficial psychological reaction, even if no improvement in visual acuity could be demonstrated and it must be admitted that any visual education that assists an individual to better utilization of his visual equip-

ment has some value even if the basic refractive error is unchanged. It is doubtful if the small percentage of improved acuity in certain cases justifies the time and effort expended and the use of these exercises as routine treatment would not be recommnded.

Too much emphasis cannot be placed on the importance of the general hygienic management of myopic patients. Insistence on a certain amount of exercise in the open air, a healthful diet, elimination of focal infections and treatment of chronic or debilitating diseases are of utmost importance in proper management.

If this brief review of myopia refreshes our memories and stimulates our interest anew it will have served its purpose. We have noted that the elongated globe theory is not considered tenable in the light of present knowledge, but that approximately 95 per cent of myopes represent normal physiological variations, or an insufficient amount of the normal hyperopic reserve which is usually present at birth. Etiologic factors of importance are heredity, age, race and sex. The most important therapeutic measure is fully correcting lenses, constantly worn, and rechecked at frequent intervals in order to keep the myopia fully corrected. The treatment of progressive, malignant myopia is an individual problem, involving restriction of unnecessary near work, hygienic and dietary measures, treatment of systemic conditions, local use of epinephrine drops, calcium, parathyroid, Vitamin D and measures to prevent excessive convergence.

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AN EPIDEMIOLOGICAL STUDY OF PINWORMS IN PATIENTS AT OKLAHOMA HOSPITAL FOR CRIPPLED CHILDREN*

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Grandma can be right when she says Johnny is wormy. For when it comes to pinworms, we, in 1946, can reiterate what Leuckart said seventy years ago[1], that "there may be only a few who do not harbor them at one time or another."

Enterobius vermicularis, also known as *Oxyuris* and thread or pinworm, is a small, round, white worm, 2 to 13 mm. long. Since it is not harbored by experimental animals, the life cycle is not completely proved. In man the adults live in the lower intestinal tract with their heads attached to the mucosa. After the female becomes gravid, she seldom lays eggs in the bowel, but migrates through the anal opening, sometimes during waking hours, but often while the host is asleep. On reaching the outside air, her uterus explodes, and if the surface is moist she may crawl about, leaving a track of ten thousand to twenty-five thousand eggs on the perianal and surrounding regions. These eggs are scattered by contamination, and some think by particles of dust in the air, to clothing, bed linen, furniture, bathroom and light fixtures, and may finally reach the mouth of someone[3]. Depending on humidity and temperature, a large percentage of these eggs (50 to 90 per cent by different investigators) are not viable. They die most quickly in a warm, dry place[2]. When they are swallowed and reach the small intestine, the larvae emerge from the shell and migrate to the large bowel. Fifteen to twenty-eight days[3] after the eggs are ingested, females migrate out to begin another cycle.

Stool examination to find the eggs is obsolete since Cram[4] showed only one out of ten positives are found in this way. In the

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last nine years wide use has been made of the National Institute of Health or NIH swab. It consists of a small square of cellophane wrapped on the end of a glass rod, which is stroked over the perianal folds to pick up eggs. Another effective and popular method has been using ordinary Scotch tape to pick up the material; the tape may be suspended from forceps, or held over the end of a tongue blade, or over the closed end of a test tube. Petersen and Fahey[5] found just pressing a microscopic slide directly around the anal region to be satisfactory.

The largest pinworm survey and study has been made by Cram[3] and her associates under the National Institute of Health, U. S. Public Health Service, between 1937 and 1939. This study covered varied groups of adults as well as children in Washington, D. C., and included patients in private practice. It showed 41.5 per cent of 2,895 white people and 12.9 per cent of 1,099 negroes positive. Other surveys in this and several foreign countries have indicated 30 to 50 per cent infection as a rule. The colored race has a lower incidence, and institutionalized groups seem to have a higher rate. In six children's homes in New Orleans 74.3 per cent had enterobiasis[1]. These worms were found in about three-fourths of the chronic mental patients at Minnesota State Hospital[5]. Hospitalized children have shown less infection, 19 per cent at the Children's Hospital in Boston[6], and 16.3 per cent at the Indiana University Medical Center[7].

SURVEY RESULTS

We have made a limited survey of 117 children who were patients in the Oklahoma Hospital for Crippled Children, Oklahoma City. They are from numerous counties of the state. Between seven and eight in the morning, before the children had their baths, specimens were collected on three days, usually successive ones. A piece of Scotch tape was held over the end of a tongue blade with the sticky side out. This was sponged over the perianal region and perineal folds and then stuck with the stick side down to a glass slide. At our convenience the slides were examined. After raising the Scotch tape, a few drops of mineral oil were put on the slide, and the tape replaced, then, a cover glass or slide, cut to the size of 12x25 mm., was laid on top the tape with more mineral oil underneath it. All the area under this cover glass was examined microscopically for the flat sided pinworm egg, which has a shell and usually contains an embryo.

TABLE I

SEX	TOTAL CHILDREN	PER CENT POSITIVE
Male	48	18.7
Female	69	43.4
Total	117	33.3

One-third of the 117 children examined had pinworms. Table I shows that we found more in girls than boys. We do not consider this of significance because other surveys have given varied findings in comparing the two sexes.

TABLE II

AGE IN YEARS	TOTAL CHILDREN	PER CENT POSITIVE
1-5	26	26.9
6-11	44	47.8
12-17	37	29.7
Over 18	10	0.0
Total	117	33.3

Table II shows the difference found in age groups. Enterobiasis in our preschool children, 26.9 per cent, was less than in the 6 to 11 age group, in which 47.8 per cent were positive. The older group, 12 to 17 years of age, with 29.7 per cent positive, shows a trend toward the lower incidence found in adults. None of our ten subjects over 18 were found to have pinworms. These figures fall in line with those of Cram[11] and her associates, in which 51 per cent were positive in the school age, 22 per cent in adults, and 35 per cent in the preschool age. Nursery school groups have been known to be as heavily infected as older children, but it can be easily understood that unless there is a family infection the preschool child does not have the varied contacts and opportunities to be exposed to the infection and, also, may be more closely supervised about hand washing and personal hygiene.

Our third table shows that children staying in the hospital a month or longer had a decreased infection rate. If the patient had been in Oklahoma Hospital for Crippled Children 31 to 60 days, he was only half as likely to have enterobiasis as those spending less time

in this institution. In slides taken over 60 days after admission, only 7.2 per cent were positive. The hospital surveys in general have shown a lower incidence than found in school groups, or in children at camps, clinics, and other places. However, we have not found another tabulation bringing out this inverse ratio of infection with the length of hospitalization. Off hand, one would be inclined to think this is due to more frequent change of night clothes, bed linens, bathing, and general cleanliness. However, one is reminded of the $700 which was spent on a six week cleaning up campaign to reduce enterobiasis in a children's home in New Orleans with the result of more positives than before[10]. E. C. Jones[8] suggests that frequent enemas in the hospital may be part of the explanation. Hospitals usually are well heated, and it is recalled that the eggs become nonviable more quickly in a warm, dry atmosphere. A number of those remaining in the hospital for long periods of time have been confined to their own bed, but are not entirely free from contamination by other children who are up, nor by articles in the wards. Enterobiasis has not been studied from the food-handling standpoint, but it is possible that the food in hospitals is handled in a more sanitary manner. Also, it may be that some widely used drug or other disease may interrupt the life cycle.

TABLE III

DAYS IN HOSPITAL	TOTAL CHILDREN	PER CENT POSITIVE
0-30	64	48.4
31-60	25	24.0
Over 60	28	7.2

Our study, like others, showed no difference of infection with economic level. The income per month of the wage earner of the child's family was used as a measure of economic level. Sewitz[1] found no correlation between the number infected and the money spent on maintenance or food in the New Orleans children's homes.

Our rural group was not significantly different from the urban one. Eleven children from Oklahoma City, not a large enough group to be significant, showed 45.5 per cent infection — only slightly higher than the whole group.

If we had taken only the first slide on each individual, 80 per cent of our positives would have been discovered, and with two slides 89 per cent. We undoubtedly missed some by not taking more than three slides. Wright and Cram[9] found one NIH swab detected 72 per cent of the positives and seven swabs 99 per cent. If enterobiasis is suspected, certainly multiple slides should be negative before dismissing the impression. It is not rare for the vaginal swab to be positive when the perianal material is negative. Microscopic examination for eggs and seeing the worms are the ways of making a definite diagnosis. Apparently there is no eosinophilia, and symptoms usually are not present or are nonspecific.

Though often not impairing good health, various investigators believe pinworms may cause perianal itching and inflammation, abdominal pain and gastrointestinal disturbances, vaginal discharge in female children, restlessness, and occasionally allergic and other manifestations. Those who have compared patients before and after treatment believe there is some improvement shown by weight gain, lessening of dark circles under the eyes, and improved color, as well as relief from local symptoms when present.

SUMMARY

Enterobius vermicularis was found in one-third of 117 children hospitalized in Oklahoma Hospital for Crippled Children. This and other studies show it is a common infection. It increases in the younger school age group and decreases with the length of stay in the hospital.

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CLINICAL PATHOLOGIC CONFERENCE

The School of Medicine of the University of Oklahoma

Presented by the Departments of Pathology and Medicine

ROBERT H. BAYLEY, M.D. AND BELA HALPERT, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HALPERT: When a patient who enters the hospital in a desperate state dies shortly after admission, there is not much opportunity for the clinician to gather all the information and laboratory data necessary for an accurate clinical diagnosis. Such a state favors rather free speculation as to the nature of the disease. If a necropsy is performed however, speculation tends to be inhibited. This is not a forewarning to Doctor Bayley; it is merely to point out to all of you that since this patient died a short time after admission, there was not ample opportunity to gather various information which would be very useful in arriving at a correct clinical diagnosis.

Doctor Bayley did not attend this patient nor has he been informed of the necropsy findings. He will present and analyze the clinical data.

PROTOCOL

Patient: E. R., white female, age 38; admitted May 20, 1946; died May 20, 1946.

Chief Complaint: Precordial pain and weakness.

Present Illness: About two years before admission, the patient first began having pain in the left shoulder, precipitated by exertion. At the onset of the illness this pain was localized to the shoulder and was relieved by rest. During the past two years these attacks have become more frequent and more severe. For the past few months the pain has radiated down the left arm across the chest and at times into the neck. Recently, attacks of pain have occurred during bed rest. The patient has taken nitroglycerine tablets, 1 100 grain, but with only slight relief.

Past History: Noncontributory.

Family History: Noncontributory.

Physical Examination: At the time of admission, the patient was well developed and well nourished. She did not appear acutely ill. The lips were pale, but not cyanotic. The lung fields were clear throughout. The heart was not enlarged. The first aortic and first pulmonic heart sounds could not be heard. There was a soft blowing diastolic murmur heard best to the left of the sternum in the fourth interspace. Blood pressure was 110 64.

Laboratory Data: E.C.G. report: "Normal E.C.G. — heart in semivertical position."

Clinical Course: The patient was admitted and a history was taken. Routine orders were written. About 8:00 p. m. she complained of pain in the left shoulder for which she was given codeine, grains one-half. She obtained relief about 15 minutes later and went to sleep. At 10:45 p. m. she was heard to be gasping by the nurse who found her in extremis. She died ten minutes later.

CLINICAL DIAGNOSIS

DR. BAYLEY: The case is that of a white female, age 38, who died approximately twelve hours after admission to this hospital. Her chief complaint was of precordial pain and weakness. Heart pain in an individual under forty at once suggests two etiological factors. In previous years when our treatment for syphilis was not as effective as it is today, syphilis was one of the most common causes of heart pain in the third decade of life. Rheumatic fever is a common cause of heart disease in the second and third decade, but it is not common for chronic rheumatic heart disease to be accompanied by the syndrome of angina pectoris. Approximately thirty cases have been recorded in which patients with chronic rheumatic heart disease presented, in addition, angina pector-

is. The majority of these patients had high-grade mitral stenosis. Under these conditions the stroke volume output of the left ventricle is small so that the systolic pressure in the aorta is relatively low. The pressure gradient through the coronary tree is small so that coronary blood flow is diminished, particularly during systole. In this way a relative myocardial ischemia results. For those who believe that heart pain is a direct effect of myocardial ischemia, this explanation is satisfactory. Some years ago, Dr. Paul B. White had no difficulty in collecting one hundred cases of myocardial infarction in people under 30 years of age. The youngest case of which I am aware is that of a child three years old, reported from the Mayo Clinic. We must therefore consider in this case, the possibility of atherosclerosis of the coronary arteries with or without myocardial infarction. Rheumatic etiology is an unlikely possibility.

About two years before admission, this patient began to have pain in the left shoulder which was precipitated by exertion. At the onset of her illness this pain was localized to the shoulder and was relieved by rest. These are cardinal features of heart pain. During the past two years these attacks became more and more severe. For the past few months the pain was described as radiating down the left arm, across the chest and, at times, into the neck. Recently she had been having attacks of pain while lying in bed. This course of events, particularly the occurrence of pain during bed rest, has been correctly accepted by clinicians as an ominous sign. Neglecting age, atherosclerosis of the coronary arteries is the most common etiological factor behind this course of events. The patient had been using nitroglycerin tablets, grains 1/100, with but only slight relief. The use of nitroglycerin with relief of heart pain may be interpreted in two ways. It may be taken to indicate that nitroglycerin has relaxed spasm in the coronary arterial tree, improved coronary flow and thus relieved myocardial ischemia, and the resultant cardiac pain. If pain is a direct effect of *spasm* of the coronary arteries, this drug may relax the tension and relieve the pain directly and the ischemia incidentally. At the time of admission, the patient was well developed and well nourished. She did not appear acutely ill. Her lips were pale but not cyanotic. The lung fields were clear throughout. The heart was not enlarged. A normal cardiac size would be strong evidence against chronic rheumatic heart disease with high-grade mitral stenosis and a resulting syndrome of angina pectoris. The first aortic and first pulmonic heart sounds could not be heard. The definitely diminished first heart sound may be evidence of myocardial damage. There was a soft blowing diastolic murmur heard best in the sternum in the fourth intercostal space. That is the typical place for the diastolic murmur of aortic insufficiency. The blood pressure was 110/64. This diastolic pressure is a bit low and fits in with the diagnosis of aortic insufficiency. The peripheral-vascular signs of aortic insufficiency, carotid pulsation, pistol shot sound at the femorals, Corrigan's pulse, etc., are evidence of free aortic insufficiency where the valve leak is large. This patient probably had a low-grade aortic insufficiency. There are two common etiological factors which can produce this valve lesion: *rheumatic fever* and *syphilis*. It is often very difficult to decide which of these diseases is responsible in a given case. There is an important structural difference in the lesion which syphilis produces, a pure aortic insufficiency. Rheumatic aortic disease tends constantly toward aortic stenosis. A typical rheumatic aortic stenosis has a systolic, as well as a diastolic, murmur. However, the aortitis of which the syphilitic valve disease is a part, may produce a fusiform aneurysm of the ascending limb of the aorta, and the blood passing from a normal valve opening into the dilated aorta can give rise to a systolic murmur. To make the problem more difficult, rheumatic aortic insufficiency with an increased pulse pressure may produce dynamic dilatation of the aortic arch. In one such instance, a girl, seventeen, had free aortic insufficiency on the basis of four previous attacks of rheumatic fever and was presented at several medical clinics on the East Coast by Dr. William Osler because of a pulsating mass as big as a hen's egg, which protruded from the suprasternal notch and which produced a palpable systolic thrill. He repeatedly cautioned against the diagnosis of true aneurysm in this type of case. Necropsy two months later showed an aortic lumen too small to admit the index finger. This was an instance of dynamic dilatation of the aorta which, upon death, returned to its original size. In another instance, a young man with rheumatic aortic insufficiency had sufficient dynamic dilatation of the aorta so that the right margin of the ascending limb extended to the right midclavicular line and the left margin to the left quarter clavicular line. This dilatation completely subsided following two weeks bed rest, during which time

the diastolic pressure rose from 40 mm. to a normal of 80. We do not have a chest x-ray on this patient from which we could consider these details. When we can be sure that an element of stenosis is present at the aortic valve, we can be sure that the etiology is rheumatic disease with one exception. In people beyond sixty, calcific aortic disease results in stenosis which may not be accompanied by aortic insufficiency.

In luetic aortic valve disease, the average duration of life after aortic insufficiency becomes clinically evident is one and one-half years. These people may get along fairly well for several years until free aortic insufficiency develops. The heart then becomes greatly enlarged; the low diastolic pressure impairs coronary flow and congestive failure supervenes. The typical syndrome of angina pectoris is not common. They complain usually of a sense of substernal pressure which comes on with spells of paroxysmal nocturnal dyspnea. This form of so-called cardiac asthma is the direct result of transitory left ventricular failure and transitory pulmonary edema. No such picture is presented in this case

The electrocardiogram was reported as normal. This curve was recorded while the patient was having pain. The electrocardiogram is an accurate measure of local ventricular ischemia, and those who believe that heart pain results from myocardial ischemia would have considerable difficulty in attempting an explanation here. We had better think of myocardial pain as caused by coronary arterial spasm. I know of two conditions in which tension may develop along the coronary arterial tree and be unassociated with the development of secondary myocardial ischemia: (1) with advanced atherosclerosis and calcification of the vessel in which contraction of its muscular wall cannot alter the size of the lumen, and (2) in which the vessel has already been occluded either by thrombosis or by closure of the coronary ostia from a luetic aortitis in which the process has been gradual and the myocardium now gets its blood supply by collateral channels. Under these conditions spasm of the vessel may occur and be accompanied by pain, but unattended by myocardial ischemia. Here are slides of two electrocardiograms. The first shows an upward displacement of the RST junction in unipolar leads in which the exploring electrode is superjacent to the ischemic region of the heart wall. This type of injury effect indicates that the intensity of the ischemia is greater at the epicardial than at the endocardial surface. In the second curve, there are striking downward displacements of the RST junction in the unipolar leads in which the exploring electrode is superjacent to the region of ischemia. This phenomenon indicates that the intensity of ischemia is greater at the endocardial than at the epicardial surface. In short, the electrocardiographic evidence of ischemia depends on the fact that the ischemia is local or that there is a difference in intensity of ischemia at the two surfaces, epicardial and endocardial. Modern electrocardiographic theory predicts that if ischemia is diffuse or of *uniform intensity throughout all regions of the ventricular muscle*, the form of the final ventricular deflections will be normal. Such might be the case here, in which the ostia of both coronaries have been gradually closed; if so, it will be the first case of this sort which I have seen.

There was a note on the chart that during one attack of pain, the heart was beating very fast, 140 per minute. It is possible that a mechanism disturbance such as paroxysmal ventricular tachycardia was present. The exact nature of death in this patient is most difficult to decide upon. Sudden death as a rule does not occur in chronic luetic aortitis. The usual picture is that of congestive heart failure. Perhaps the mechanism disturbance recurred and resulted in acute pulmonic edema. At the end, the patient was gasping for breath but did not complain of pain. In summing up, I believe that this patient had luetic aortitis. This diagnosis is based primarily on the presence of the aortic diastolic murmur. The age is typical for this lesion since, on the average, it occurs 15 years after acquiring the infection. The ostia of both coronaries may have been closed. When the mouth of one coronary is closed, local ischemia and electrocardiographic changes of one kind are apt to appear. When the mouth of the other coronary is closed, electrocardiographic changes of another kind usually result. Death might have been produced by an acute pulmonary edema following the onset of a mechanism disturbance. This is as far as we can go with our diagnosis with the information at hand.

ANATOMIC DIAGNOSIS

DR. HALPERT: In order to relieve the tension, I should like to state that Doctor Bayley's conclusion was verified at necropsy. The liver extended 6 cm. below the costal margin in the right midclavicular line and this enlargement was due to acute congestion. Es-

sentially all other findings were negative except for the changes in the heart and in the aorta. The lungs weighed 250 Gm. each and there was some evidence of chronic passive congestion, but little edema. The heart was not significantly enlarged; it measured 10 cm. from base to apex and 9 cm. across the base; it weighed 250 Gm. The apex was rounded, evidence of slight dilatation. The left ventricle was moderately thickened and trabeculae carneae somewhat flattened. Valve orifices were of the usual dimensions. The most striking changes involved the aorta and aortic valves. The cusps of the aortic valves were thickened, rolled, shortened and the commissures were slightly separated. In searching for the coronary orifices only one could be found and it was barely patent, approximately one millimeter in diameter. The coronary arteries proper were soft and there was but minimal atherosclerotic change. They were widely patent save in the region of origin. The bulb of the aorta was puckered, scarred and presented longitudinal ridges, the typical appearance of a syphilitic aortitis. These changes did not extend beyond the end of the arch.



FIGURE 1.

The arrow points to the only coronary orfice which was evident at necropsy. Note the very marked narrowing. The aortic valve cusps exhibit thickening, rolling of their free margins and separation of their commissures.

The syphilitic aortitis and valvulitis, with the narrowing and occlusion of the coronary orifices certainly provide an anatomic basis for the clinical picture of angina pectoris. There were no E.C.G. changes and these can be absent under the conditions which Dr. Bayley mentioned, namely, gradual occlusion of *both* coronary orifices. Under these circumstances collateral circulation would supply blood through the otherwise intact coronary arteries. The aortic valves were incompetent to slight or moderate degree principally because of the shortening and thickening. Under these conditions dilatation of the aortic ring is not necessary for aortic insufficiency. In this case the aortic valve orifice measured 6 cm. in circumference. Several sections of the myocardium exhibited diffuse interstitial fibrosis, positive morphologic evidence in this case of a general myocardial ischemia. Thus the changes suspected clinically as the basis for signs and symptoms were verified at necropsy.

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TETANUS TOXOID

Important advances were made in the prevention and treatment of disease during the war. One of the interesting advances was concerned with the use of tetanus toxoid in the Army. Ramon and his associates had demonstrated the possibility of immunization against tetanus in the nineteen thirties. In the late summer and fall of 1940 the Medical Department of the Army made repeated attempts to impress the War Department general staff of the value of tetanus toxoid and to introduce its use as a universal practice in the Army. These efforts were rebuffed by the War Department general staff because of the fear of adverse criticism from anti-vaccination groups if another immunization procedure was added to those already in use. (It is to be noted that in matters of health the Medical Department functions only in an advisory capacity to the general staff.) In the middle of 1941 the general staff reversed its position and authorized the immunization of all personnel in the Army of the United States with tetanus toxoid. Rarely has an immunization procedure been so effective, there being but three recorded cases of tetanus in the immunized personnel of the Army during the entire war. Tetanus developed in only one battle casualty.

President's Page

As this is being written the March of Dimes is on and it is my hope that everyone will make a liberal contribution to this most worthy cause. The victims of polio are from all strata of society and many of them from homes unable to pay for the necessary care and hospitalization so essential to their ultimate recovery.

The Congress and State Legislature are now in session, and it behooves each one of us to watch for legislation introduced and to consult our representatives in both bodies, State as well as National, so that they may be properly advised at all times on matters affecting public health to the end that the public may continue to enjoy the protection our present laws give them and these measures not be destroyed by selfish interests.

Watch for the date of your Councilor District meeting and try to attend as you will not want to miss this meeting. The program will be instructive and will be along lines you are vitally interested in.

L. C. Kuykendall

President.



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ASSOCIATION ACTIVITIES

ANNUAL MEETING, MAY 14-16

The Annual Meeting of the Oklahoma State Medical Association will be held May 14 through 16 at the Mayo Hotel in Tulsa, it has been announced by the Annual Meeting Committee. Plans are being rapidly completed to make the 1947 Session one of the most outstanding that has ever convened.

Outstanding Men To Be Guest Speakers

Dr. Maurice J. Searle, Chairman of the Scientific Work Committee, has announced that thus far four speakers invited to participate in the meeting have accepted, as follows: Dr. Nicholson J. Eastman, Obstetrician-in-Chief of the Johns Hopkins Hospital, Baltimore, Maryland, Obstetrics and Gynecology; Dr. Bedford Shelmire of Dallas, Texas, Dermatology; Dr. James W. Watts of Washington, D. C., Neurology and Psychiatry; Dr. Francis L. Lederer, Professor and Head of the Department of Otolaryngology, University of Illinois College of Medicine, Chicago, Illinois, Eye, Ear, Nose and Throat. Announcement will be made of others who will speak as soon as final acceptances are received.

Change in Scientific Sections

At a joint meeting of the Annual Meeting Committee, composed of the President, President-Elect, Secretary-Treasurer; the Scientific Work Committee; and officers of the Scientific Sections, it was proposed to reduce the number of sections into which the meeting is divided, predicated by the fact that there are not adequate physical facilities in Oklahoma City and Tulsa to house the meeting as it is now constituted. The Committees recommended that the number of sections be reduced from the present nine to a maximum of four and a minimum of two. Upon this recommendation ballots were mailed to all members of the House of Delegates and to date returns have been received from 95 of the 109 delegates. The vote was four to one in favor of reducing the number of sections to two, General Surgery and General Medicine, with sub-divisions as follows:

General Medicine	*General Surgery*
Internal Medicine	General Surgery
Neurology & Psychiatry	Eye, Ear, Nose & Throat
Pediatries	Radiology
Radiology	Urology
Public Health	Orthopedics
Dermatology	Obstetrics & Gynecology

It was emphasized by the Committees that there will be at least ten guest speakers at the Annual Meeting, and each of the nine sections now existing will be represented. It was believed that reducing the number of sections would increase the benefits to the members of the Association in attendance.

HITS, RUNS AND ERRORS

Since the State Legislature is now convening and many other time consuming matters are at hand, "Hits, Runs and Errors" have been suspended from the Journal. Perhaps a leveling-off of activities will enable its reappearance at a later date.

TULSA COUNTY BOND ISSUE DEFEATED

On December 17, 1946, Tulsa County's hospital bond issue was defeated by a vote of five to three. Only one in 12 registered voters responded to the election. Major sponsors of the issue were the Tulsa County Medical Society, the Tulsa Tribune, and the Tulsa Chamber of Commerce.

OKLAHOMA DIVISION, AMERICAN CANCER SOCIETY COMPLETES MOST SUCCESSFUL YEAR IN 1946 — MOBILE UNIT FIRST OF ITS KIND IN NATION

The Oklahoma Division of the American Cancer Society inaugurated a most unique and gratifying medical service to the people of Oklahoma in the early part of 1946 by means of a mobile cancer detection clinic — the first of its kind in the nation. Fourty-four clinics were held in all sections of the state, selected in such a manner as to serve all counties. Of the 3,165 persons examined, 723 definite cases of cancer were discovered. Suspicious cases totaled 358, all of which are now under observation.

Survey Made of Physicians

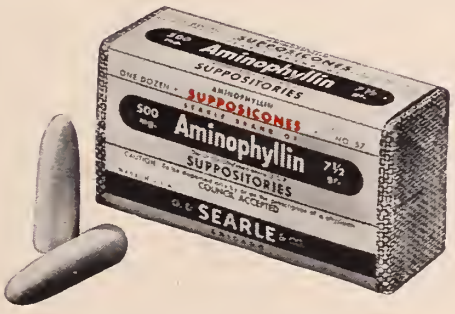
The extreme effectiveness of the mobile clinic is best reflected by results of a recent survey made among physicians in counties visited by the unit. Survey showed that most local doctors' examination of private patients increased from 25 to 100 per cent as a result of the educational publicity given the clinics. The devised system of alphabetically rotating people specifying no family physician among members of the medical society was indicated to be entirely satisfactory by 79 per cent of the physicians replying to the survey. Eighty-two per cent approved of an annual repeat visit of the mobile clinic. A maximum number of centers for clinic visits was indicated most desirable by the doctors. The survey indicated that the findings of examining doctors were sufficiently clear and complete to be of value to the private physicians of the patients examined.

Results of the second portion of the survey, relative to a contemplated postgraduate course on cancer for physicians, indicated that the majority want this course to be patterned after the present plan of the Postgraduate Committee of the State Medical Association, which would bring the instruction to the physicians by establishing teaching centers in each of the ten councilor districts. An overwhelming majority of physicians replying to the survey favor a centrally located cancer hospital in Oklahoma and feel that it should be made available to both private and charity patients with definite affiliation with the Medical Research Center and the University of Oklahoma School of Medicine.

Other Important Activities of 1946

Activities of the 1946 program embraced the following major divisions: Education, medical service, research, organization and fund raising campaign. Among the media employed to educate the public concerning danger signals of cancer was an extensive program of newspaper advertisements, articles and editorials. More than 4,000 articles appeared in state papers during 1946, which established a national record. Liberal donations of radio time were secured from the radio stations of Oklahoma. Fifty thousand rural families received home study courses on the subject of cancer through the mail. Attractive and instructive exhibits were displayed at 45 county fairs and three state fairs with extensive distribution

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of literature. Approximately 700 cancer educational meetings were held during the year, having audiences ranging up to 2,000 people. Thirty-eight county medical societies held scientific meetings on cancer during the year.

Progress in organizational work included establishment and maintenance of permanent county organizations for directing activities. Ten district units are now functioning. Gratifying response by the public to the annual campaign for funds and the tireless efforts of county and community chairmen made possible the great success demonstrated in 1946 for the state cancer program.

1947 Program

The 1947 program of the Oklahoma Division embraces a three-fold objective: (1) Accomplish maximum benefit for the greatest number of people at minimum cost. (2) Lay a solid, ethical foundation upon which other future programs may be built. (3) Make the program flexible to the extent that changing circumstances and conditions may be met without disrupting any part of the over-all program.

The educational program now under way will be intensified during 1947 by use of all known means in an effort to publicize the fact that 30 to 50 per cent of all deaths resulting from cancer could be avoided by early diagnosis and treatment.

Research and experimentation will be substantially increased this year; visitation by the mobile detection clinic will include all sections of the state not previously served directly. Courses to inform the busy physicians of latest scientific methods of cancer diagnosis and treatment will be conducted during 1947.

THERE IS TO BE A SPECIAL TRAIN TO AMA CONVENTION!

Oklahoma physicians and their wives who go to the AMA Centennial Meeting at Atlantic City, June 9 to 13, will have the opportunity to make their trip via a special train co-sponsored by the Oklahoma and Kansas Medical Associations.

Details of arrangements are again being handled by the Rainbow Travel Agency of Oklahoma City, and Mr. Harry Kornbaum, manager. Many will remember Mr. Kornbaum's wonderfully arranged trip to the California meeting last year.

The special train with the very best accommodations is scheduled to depart from Oklahoma City and Tulsa on the evening of June 4 via the Frisco Railway, stopping by St. Louis to pick up the Kansas delegates enroute to Washington, D. C., where an interesting two-day stopover has been arranged for June 6 and 7.

The party arrives in Atlantic City Sunday evening, June 8. Hotel arrangements at the convention city are now being worked out and will be announced shortly. The AMA convention will be in session June 9 through 13.

Two Post-Convention Tours Planned

All members of the tour group will journey to New York City on the evening of June 13 for a three-day stay, at the conclusion of which the group will separate into two groups. Tour No. 1 will return directly from New York and arrive in Oklahoma on June 18. Those who desire may join Tour No. 2, which is an extensive trip up the Hudson River to Albany and Boston. After two days in Boston the train will go to Quebec for a two-day tour of that city and on to Montreal and Niagara Falls. From Niagara Falls to Buffalo, and an overnight cruise down Lake Erie (240 miles) to Detroit, Michigan. With a short and interesting stopover in Detroit, the party departs via Chicago and on to Kansas City and Oklahoma, arriving in Oklahoma City June 25. Tour No. 1 is of two weeks duration. Tour No. 2 to Quebec will require three weeks.

Important Details To Be Announced Soon

The cost of both of these all-expense trips will be announced soon, as well as many other interesting details of the post-convention tours. It is anticipated that literature giving complete information will be mailed to each member of the State Association during February.

PRESIDENT APPOINTS NEW COMMITTEE ON MENTAL HYGIENE

Dr. L. C. Kuyrkendall, President, recently announced the appointment of a new Advisory Committee on Mental Hygiene. The Committee held its initial session January 17, at which time Mr. Justin G. Reese, Field Representative of the National Committee for Mental Hygiene, of Chicago, Illinois, spoke on his recent survey of Oklahoma's mental institutions. Mr. Reese also made several suggestions as to how the new Committee could help in the Mental Hygiene Association's crusade to improve conditions in the State of Oklahoma.

The elected chairman of the Committee is Paul Gallaher, M.D., Shawnee. Members are: Hugh Galbraith, M.D., Oklahoma City; C. E. Leonard, M.D., Oklahoma City; Coyne Campbell, M.D., Oklahoma City; T. R. Turner, M.D., Tulsa; John Morey, M.D., Ada; Bernard Branley, M.D., Tulsa; W. W. Rucks, Jr., M.D., Oklahoma City; Bert Keltz, M.D., Oklahoma City; Harry Daniels, M.D., Oklahoma City; Jess Herrmann, M.D., Oklahoma City; C. W. Arrendell, M.D., Ponca City; J. B. Snow, M.D., Oklahoma City; Roy Emanuel, M.D., Chickasha; Maurice Searle, M.D., Tulsa; John Hackler, M.D., Oklahoma City; and John Shackleford, M.D., Oklahoma City.

DR. RITZHAUPT ELECTED HEAD OF AMERICAN POULTRYMEN

New head of the American Poultry Association for the next two years is Dr. Louis H. Ritzhaupt of Guthrie, who also serves as Logan County's State Senator. As head of the international organization of poultrymen, Dr. Ritzhaupt will preside at the association's annual convention in February. The association has its national headquarters in Davenport, Iowa, and includes all of the United States, Cuba, South America, Mexico, and islands of the sea. In the balloting for president Dr. Ritzhaupt carried all but three of the association's 12 districts. Dr. Ritzhaupt was also reelected president of the Oklahoma Poultry Federation last November, and has served as an officer of the state organization for the past 27 years.

ASK YOURSELF THIS QUESTION, DOCTOR

"If the Oklahoma State Medical Association is not giving you the things you think it should; if it is not progressive according to your views; if it is not meeting a profound need of the medical profession: what have you done about it, or what do you intend to do, besides paying your dues?" *Your* ideas and *your* criticisms for the improvement of the quality of service are needed — but they will be of little value if you remain silent!

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HAVE YOU HEARD

Two new fellows of the American College of Surgeons are *Drs. J. Moore Campbell* and *Robert B. Howard*, both of Oklahoma City, who were received into fellowship during the Clinical Congress at Cleveland, Ohio, on December 20, 1946. Formal induction into the organization was also held for *Dr. Lloyd H. McPike*, of Vinita, who was chosen for the honor in 1945, when travel restrictions postponed the formal exercises.

Dr. Bob McIntosh was appointed to the Tahlequah Hospital Board at a meeting held December 30, 1946, it was recently announced.

A graduate of the Oklahoma University School of Medicine, *Dr. N. F. Wynn*, who served as Chief of Surgery aboard a Navy hospital evacuation ship in the Pacific during the recent war, has returned to Oklahoma and is now installed in offices over the Broncho Theater in Edmond.

Dr. Mark D. Holcomb has been elected president of the Enid Exchange Club, and was ushered into office at formal installation ceremonies held January 6.

Dr. Roy Lee Fisher, formerly of Frederick, is now stationed with the Veterans Administration in Seattle, Washington.

Dr. Albert Ernest Hennings of Tuttle was recently elected State Representative from Grady County to fill the vacancy left by the death of C. D. Van Dyke.

The new wing of the University Hospital appropriated by the 1945 Legislature has been started. It will extend along the east side of the present hospital building.

Dr. D. H. Miller, manager of the Muskogee Veterans Hospital, recently completed a two-weeks' postgraduate course in medical practices at the University of Nebraska School of Medicine in Omaha. Acting manager for the hospital during his absence was *Dr. Emmett E. Boyd*, clinical director.

Recently returned to civilian practice is *Dr. William Best Thompson*, who has established offices in the Wiley Building, Walters, after serving as a Medical Corps captain in the Army. While in the service, Dr. Thompson was commended for meritorious service and outstanding work in an exceedingly difficult assignment at Camp Polk, La. He served as ward officer and consultant in general medicine and ophthalmology and also instructed in the Army Nurses Training Center at Ft. Louis, Wash.

Dr. Charles Stephen Stotts has returned to Fairfax from Caney, Kansas. Dr. Stotts previously had practiced in Fairfax prior to entering military service.

Dr. Frank Veroni, who came from Canada to Jay six years ago, is now returning to Toronto, Canada, to practice medicine there.

A new hospital is going up in Idabel, construction having been recently begun by *Dr. William H. McBrayer.*

NEWS

MEDICAL SERVICE SOCIETY ORGANIZED

A Medical Service Society has recently been organized in Oklahoma City. The purpose of the organization, composed of medical service representatives, is to bring about a closer cooperation in presenting pharmaceutical preparations to the medical profession in a manner that will be profitable to both the physicians and medical service representatives. Twenty-four pharmaceutical houses are represented and printed membership lists have been furnished the physicians in Oklahoma City.

Chapters have been previously established in San Antonio, Houston, Amarillo, Memphis, Wichita Falls, Little Rock, Tyler and Denver. The organization, which had its inception in Dallas in 1944, is attempting to establish chapters in all principle cities in the United States. At the present time plans are being made to organize a Tulsa chapter.

The second national convention will be held in Oklahoma City in March, 1947.

FELLOWSHIPS IN HEALTH EDUCATION TO BE OFFERED IN 1947

Fellowships leading to a Master's Degree in Public Health in the field of Health Education are being offered to any qualified United States citizen between the ages of 22 and 40, according to a statement released recently by the United States Public Health Service, Federal Security Agency. Tuition, travel expenses for field training and a stipend of $100 a month will be provided out of funds furnished by the National Foundation for Infantile Paralysis.

Candidates must hold a bachelor's degree from a recognized college or university and must be able to meet the entrance requirements of the accredited school of public health of their choice. In addition to the degree, courses in the biological sciences, sociology, and education may be required. Training in public speaking, journalism, psychology, and work in public health or a related field are considered desirable qualifications.

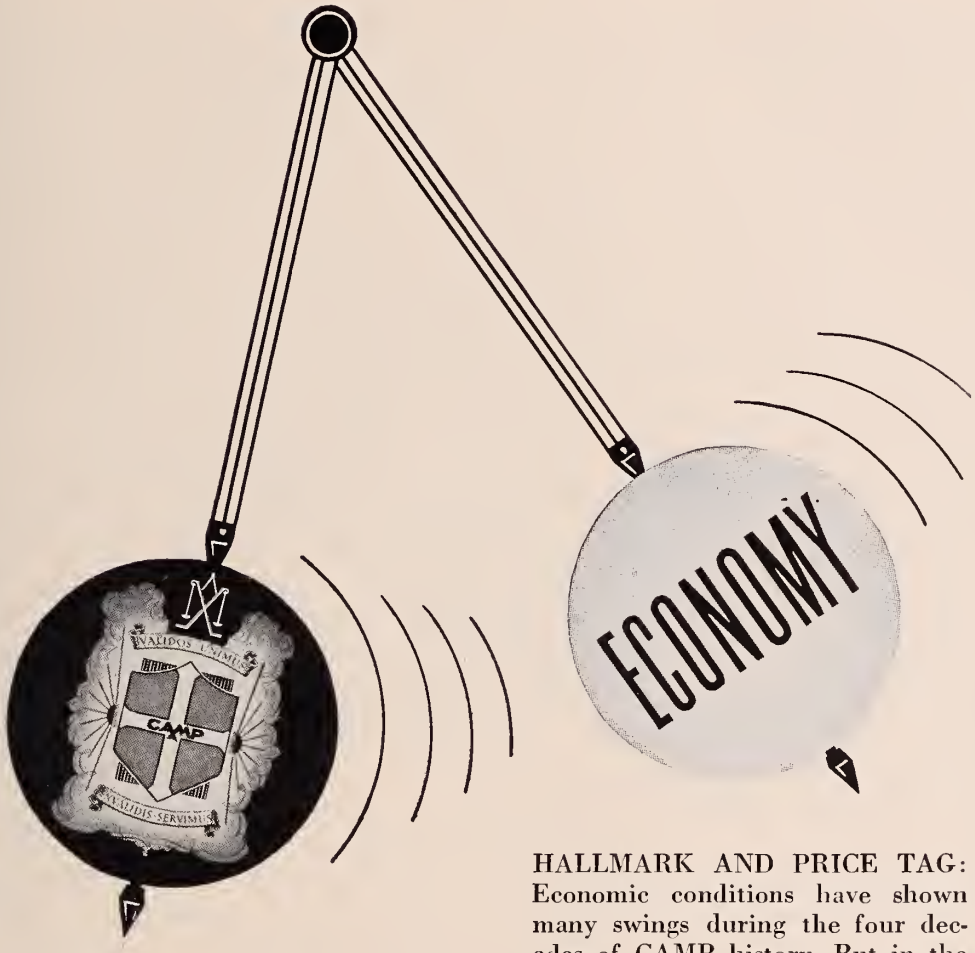
The year's training, which begins with the 1947 fall term, consists of eight or nine months academic work including: public health administration, epidemiology, public health and school health education, problems in health education community organization, and information techniques, and three months of supervised field experience in community health education activities.

Application blanks may be obtained by writing the Surgeon General, United States Public Health Service, Washington 25, D. C., and must be filed prior to March 15, 1947.

Veterans are encouraged to apply and will be paid the difference between their subsistence allowance under the G. I. Bill of Rights and the monthly stipend of $100. Employees of local and state health departments are not eligible since federal grants in-aid are already available for such training purposes.

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MEDICAL SCHOOL

CALENDAR — FEBRUARY, 1947

SURGICAL PATHOLOGIC CONFERENCES — Each Tuesday 12:00 Noon to 1:00 P.M.

MEDICAL CONFERENCES — Each Wednesday, 9:00 A.M. to 10:00 A.M.

CLINICAL PATHOLOGIC CONFERENCES — Each Thursday 12:00 Noon to 1:00 P.M.

TUMOR CLINICS — First and Third Tuesdays (February 4 and 18) 8:00 A.M. to 9:00 A.M.

UROLOGIC-PATHOLOGIC CONFERENCE — Second Tuesday (February 11) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING — Second Friday (February 14) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE — Fourth Monday (February 24) 6:45 P.M. to 7:30 P.M.

Dr. Homer F. Marsh of the Bacteriology Department attended the International Hematology and Rh Conference at Dallas on November 15 and 16 and the Second Mexican Blood Transfusion Congress at Mexico City from November 23 to 28.

The meetings were highly interesting in that for the first time since the Rh blood antigens were discovered in 1939, practically all the men from the United States, Canada, England, and Mexico who have pioneered in these investigations were able to meet to discuss their problems. Although the men at the meetings constituted no official body, the meetings were concluded by drawing up several resolutions concerning the Rh antigens. Among these was a proposal to establish at least two centers in the United States in which serum for Rh testing would be processed and standardized. A resolution to consider the adoption of the Fisher-Race system of nomenclature of Rh antigens was also set out. Discussion as to the type of antiserum to use in Rh testing and the extent of such testing in routine hospital work clarified several points at issue so that definite plans could be formulated.

Among other highlights of the meetings was a demonstration of the technics for Rh testing conducted by the men themselves who had devised these tests.

Dr. and Mrs. Robert Dennis announce the arrival of a baby boy, David Harland, December 21. Dr. Dennis is serving a Residency at Wesley Hospital.

John Glismann (Med '45), was a recent vistor at this school. Dr. Glismann has accepted a position as medical missionary to China under the sponsorship of the Christian Church upon completion of his internship.

Alumni present at the University Hospital Staff meeting, January 10, were John Carson (Med '36), of Shawnee; Frank Keen (Med '32), Shawnee; C. E. Cooke, Jr. (Med '42), Weleetka; Carl Bailey (Med '33), and Fitten Hohl (Med '44) of Stroud.

James K. DeVore was named winner of the Oklahoma Memorial Association Annual Medical Scholarship, which provides for postgraduate medical study. DeVore qualified for the scholarship by having attained the highest academic standing in his class during the four years of medical curriculum. James' parents, Dr. and Mrs. Harry S. DeVore of Fayette, Missouri, attended the presentation at the Oklahoma Hall of Fame banquet November 15.

OBITUARIES

Wendell McLean Long, M.D.
1899-1946

Wendell McLean Long, M.D., of Oklahoma City died at St. Anthony Hospital on December 27.

Dr. Long attended the University of Oklahoma and Harvard and did graduate work in Europe. He had been attending gynecologist at St. Anthony since 1929. From 1929 to 1931 he was an instructor in gynecology at the University of Oklahoma School of Medicine. He was the son of the late Dr. Leroy Long, who had beeu dean of the Medical School.

Dr. Long's outstanding civic and medical service placed him in Who's Who in America. He was a member of St. Luke's Methodist Church and the Masonic Lodge, in addition to numerous social and medical organizations.

He is survived by his wife and two children, Lyda and Wendell, and a brother, Dr. Leroy D. Long.

Richard Bland Ford, M.D.
1900-1946

Richard Bland Ford, M.D., died in his home on November 30. He had practiced formerly in Holdenville and Tulsa, having moved recently to Corpus Christi, Texas.

Dr. Ford was born April 8, 1900, at Monroe, Oklahoma. After receiving his B.S. and M.D. degrees from the University of Oklahoma he did graduate work in Vienna, Austria. He was a veteran of both world wars.

Surviving Dr. Ford are his wife, his mother, Mrs. J. B. Ford, a brother, Jo Ford, and a sister, Betty Ford.

Francis Marion Edwards, M.D.
1874-1946

Francis Marion Edwards, M.D., of Ringling died December 30 at the Hardy Sanitarium in Ardmore.

Dr. Edwards suffered a cerebral hemorrhage on December 23. Born in West Plains, Missouri, in 1874, Dr. Edwards attended medical school at the Washington University in St. Louis and did postgraduate work at the University of California and Johns Hopkins in Baltimore. He had practiced medicine in Ringling since 1915.

Survivors include a daughter, Mrs. Wilma Baker and a grandson, Francis Edward Baker, of Ringling.

John Elmer Hughes, M.D.
1879-1947

John Elmer Hughes, M.D., of Shawnee, a charter member of the Pottawatomie County Medical Society, died January 15 while on a fishing trip in Acapulco, Mexico, following a heart attack.

Dr. Hughes established his practice in Shawnee in 1906 and was a co-founder of the A. C. H. Hospital and Clinic. He graduated from Northwestern University Medical School in Chicago. Prior to the war Dr. Hughes retired but resumed an active practice when his son, Dr. Horton Hughes, entered the service.

Shawnee's most widely traveled citizen, he had hunted big game in Africa, Asia, Mexico, Alaska, and traveled in Europe and South America and in recent years had taken an interest in archeological work in New Mexico and Arizona.

Survivors in additiou to his son include his wife, a daughter, Mrs. James D'Ambrosio, Chicago, and three grandsons.



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BOOK REVIEWS

HARVEY CUSHING: A BIOGRAPHY. John F. Fulton. Springfield, Chas. C. Thomas: 1946. 718 pages. $5.00.

This charming biography of Harvey Cushing by John Fulton is much like Cushing's famous two volume biography of Osler. While both Cushing and Fulton deserve great credit for monumental tasks well performed, the observant reader must be impressed with the fact that Osler and Cushing, through their letters, diaries, notes, and published writings, left ample material for these fascinating stories. But in both instances the selection of material, the editing and bridging the gaps posed an arduous undertaking, gracefully accomplished through the "labor of love." Cushing's *Osler* and Fulton's *Cushing* should be required reading for all undergraduate students of medicine. They need the inspiration and the vision which must come through intimate acquaintance with these two great physicians representing both medicine and surgery. Fortunately the reading of Fulton's *Cushing* will stimulate interest in Cushing's life of Osler.

The biographer's knowledge of medical history highlights Cushing's sustained interest in the growth of medical knowledge and artfully correlates the past with the present, thus adding authenticated accomplishments to history in the making. The story of Cushing's career under the creative, eccentric Halsted and, in his own right, the development of neurosurgery in this country and setting standards to be followed throughout the world occasions a just pride in these two outstanding makers of history. No young doctor can afford not to sharpen his ambition upon the whetstone of the Cushing career as presented in this remarkable volume. No middle-aged doctor can afford to miss its stimulating influence and its hopeful note through unfailing effort. No old doctor should be denied the pride of profession and country which shines through pages of this fascinating book. No one can read this biography without being comfronted by the great man's faults and eccentricities. They have been freely and frankly presented by the biographer.

To sit in one's library and experience the unfolding of a great man's career and enjoy the companionship of all the distingnished personalities who come into his life as the story unfolds in a coveted privilege. The reviewer recommends Fulton's *Cushing* to every medical student, to every physician in every field of practice.—Lewis J. Moorman, M.D.

DIABETIC CARE IN PICTURES. Stern & Rosenthal. Philadelphia: J. B. Lippincott Company. 143 Pages. Price $2.00.

The book consists of 143 pages of information concerning the treatment of diabetes intended primarily for the patient. It is an attempt to simplify and clarify principles of diabetic care. The first half of the book deals primarily with diet and consists largely of picture sheets indicating the number of grams and average servings of carbohydrate, protein and fat exchanges, as well as similar representations with reference to mineral and vitamin contents of various foods. There are good height-weight tables and tables showing the daily requirements of the body. The discussion with reference to important features of the diet is clear, concise and well organized.

The second half of the book clearly pictures the various kinds and strengths of insulin and contains many excellent photographs of the technique of syringe sterilization and insulin administration. There is a full picture description of the methods of testing urine for sugar, acetone and diacetic acid. In the last portion of the book dealing with personal hygiene and special care of certain parts of the body there are especially good pictures of the care of the feet and valuable exercises commonly used.

The authors have had years of experience in the education of diabetic patients in the Boston Dispensary. The book is of great value to physicians, nurses, and dietitians who are frequently instructing diabetic patients. To selected patients of reasonable intellectual level the book will be of aid, but in the reviewer's opinion the section on diet and the multitude of pictures would be confusing to many of the diabetics who unfortunately are not of an intellectual level to fully comprehend it. This group of patients does not understand carbohydrate, protein, fat, mineral and vitamin exchanges as well as simple substitutions that may be made for a simple diet that is presented to them.—Bert F. Keltz, M.D.

VICTORY OVER PAIN. Victor Robinson, M.D. New York: Henry Schuman. 321 pages. Price $3.50.

This delightful account of the most moving story in the history of mankind is artfully presented by Victor Robinson, experienced medical historian. The author's style is so lucid and his story so compelling, the reader through sheer force of interest clings to the book while attempting to negotiate all interruptions.

From the earliest efforts to control pain in the threshold of discovery, the reader follows the developments with mounting anticipation. Then the slowly burning candle flames into glorious illumination as the efficacy of ether anesthesia is revealed. In this interesting drama the author introduces the leading characters with their respective roles. Moving across the stage we see Crawford W. Long, Horace Wells, Charles Thomas Jackson, and W. T. G. Morton. The public demonstration at the Massachusetts General Hospital by Morton and the sad controversy are graphically staged. The light traveled with its natural rapidity until all Europe was illuminated and the world had achieved "victory over pain".

Again the author lifts the curtain to reveal the preparation of chloric ether (chloroform) by Samuel Guthrie of Sacketts Harbour; his communication with Benjamin Silleman of Yale University; and Silleman's suggestion that this "sweet whiskey" might be of use in medicine. Though on the verge of discovering the anesthetic virtues of chloroform through its accidental effects upon his own child, Guthrie failed in this respect and it became the privilege of Sir James Y. Simpson to make this demonstration.

The author presents the development of local anesthesia and discusses the methods and the tools of modern anesthesia. His wide knowledge and his references to contemporary history give the book an added value. Every American physician should own and read this delightful story.—Lewis J. Moorman, M.D.



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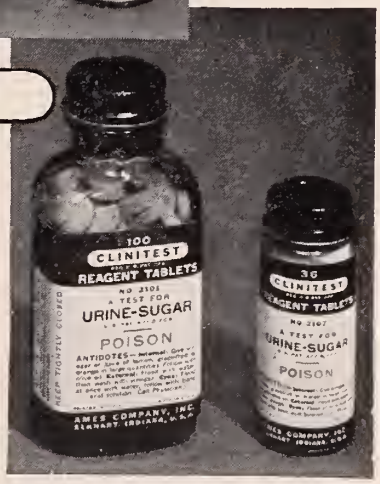


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MEDICAL ABSTRACTS

TALC GRANULOMA. A. L. Litchtman, J. R. McDonald, C. F. Dixon, and F. C. Mann. Surgery, Gynecology and Obstetrics, Vol. 83, No. 4, 1946.

This paper includes, under this title, other irritants than talc, e.g., various lubricating jellies, dry gauze, lycopodium power, etc., which may produce granulomas and adhesions when used in an operative wound. Experimentally, a series of operations on dogs is reported where granulomata or persistent fistulae occurred if the wound was seeded with talc or small cotton lint fibers from dry gauze. Microscopically, the talc lesions can best be discovered when palonized light is used. Clinically, cases of foreign body granulomata are reported which were confused with tuberculosis, cancer, etc., occurring in the peritoneum, cervix, rectum, scars, sinus tracts, gall bladder, gastro enteric stoma, etc., in which the diagnosis was possible only by examination of a biopsy specimen using palonized light.

It is not enough to wash the talc off of gloves used by the operating team. Over 22 per cent of the gloves used in surgery are perforated during operation, thus allowing talc seeding over a larger area.

Use of potassium bitartrate on gloves is suggested, as is the discontinuance of the use of dry gauze, talc, iodoform, petrolatum, and lubricating oil on instruments.

COMMENT: This article should be read, not only by surgeons, but by the nurses who prepare the gloves, gauze, and instruments used. No matter how meticulously careful the operator may be, technically he may get a poor result because he carelessly seeded the wound with small particles of insoluble foreign matter.—G.P.

IRRADIATION FOR THE ELIMINATION OF NASOPHARYNGEAL LYMPHOID TISSUE. Donald D. Proctor. Archives of Otolaryngology. Volume 43, pp. 473-480. May, 1946.

Infection of nasopharyngeal lymphoid tissue has many sequelae such as recurrent common cold, deafness due to malfunctioning Eustachian tubes, otitis media, bronchial asthma, etc. To eliminate nasopharyngeal infection an irradiation treatment is essential. Surgery does not give satisfactory results; first, the lymphoid tissue cannot be completely removed; second, recurrences are quite frequent. On the other hand, lymphoid tissue is very sensitive to radiation, so that small doses may be sufficient to bring about satisfactory results.

The irradiation is best made with beta and gamma rays, and these can be obtained from the use of tubes containing radium B or radium C. About 75 per cent of the beta rays given by a Monel metal tubular chamber are absorbed in the first 3 mm. of tissue, while 6-7 per cent of the rays will pass as deep as 20 mm of tissue.

After moderate irradiation the nasopharyngeal lymphoid tissues recover in a period of 3-4 weeks. Therefore, irradiation should be given at 25-day intervals. As a rule three treatments are adequate, but if the tissue is refractory, four or five may be necessary. If the adenoids are large, a combination of surgical removal and one immediate irradiation of each side of the nasopharynx for six minutes and forty seconds is more effective than three or four radiation treatments alone.

The dosage that has been found most effective with this applicator is one gm twenty seconds on each side of the nasopharynx. During treatment the patient should lie comfortably on a couch. The applicator is dipped into a lubricant, and inserted into the nasopharynx. The middle of the radium-containing chamber should be directly in contact with the tissue of the Rosenmuller fossa or the orifice of the Eustachian tube. When the applicator is in place it should be fixed with a suitable clamp or adhesive. At the conclusion of the treatment the mucus adhering to the applicator should be removed with a brush and the applicator quickly replaced in its lead cylinder.

The nasopharynx is reexamined at the end of 3-4 weeks, and treatment repeated at this interval and subsequent intervals until satisfactory regression has occurred.

According to the author's statistics, as a result of such treatment, 19 patients with recurrent otitis media have remained well since treatment. Twenty-six patients with chronic otitis media have now had dry ears over a period of at least many months. Eight children with bronchial asthma have ceased to suffer from attacks. Fourty-three patients with unusually severe recurrent infection of the upper respiratory tract remained relatively free from this affection for at least the past winter. Nineteen ears with severe impairment of hearing have returned to normal, and 268 ears have shown definite improvement of hearing.

Of course, irradiation in itself is not the answer to any problem in otolaryngology. It should be intelligently used in connection with other forms of treatment which have proved to be of benefit in the past.—M.D.H.

RECONSTRUCTION OF BONY DEFECTS OF THE FACE. Douglas W. Macomber, M.D. Surgery, Gynecology and Obstetrics. Volume 83; No. 6; pp. 761-767. December, 1946.

An excellent article giving the author's opinions and experiences in meeting the problem of facial restoration. The subject is well discussed and the illustrations are excellent to the point that when the paper is concluded the reader has before him the following thoughts.

1. For correction of contour defects and bony losses in facial structures, several substances are available. It is my opinion that all the foreign substances should be abandoned.

2. Homogenous preserved cartilage has its useful place, particularly in replacing lost ear cartilage and in other relatively minor defects where strength or support is not a significant requirement. It should be taken from a proved 'clean' donor under aseptic conditions and kept preserved.

3. Fat is practically useless except as a local attached subcutaneous pedicle for small depressions.

4. Fascia lata is sometimes preferable for shallow depressions and probably serves more safely and dependably than a de-epithelialized skin.

5. Iliac cancellous bone is a singularly dependable, utilitarian, safe and satisfactory tissue for correction of the types of defects that have been discussed.—J.F.B.

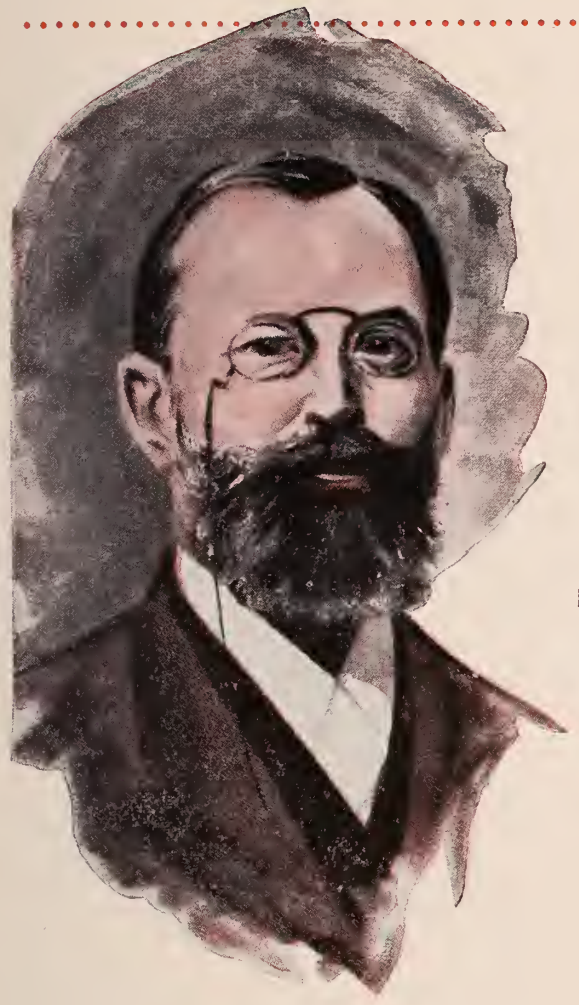
KEY TO ABSTRACTORS

G.P. Grider Penick, M.D.

M.D.H. Marvin D. Henley, M.D.

J.F.B. John F. Burton, M.D.

Men and Amino Acids



EMIL FISCHER—1852-1919

Emil Fischer—brilliant investigator, profound thinker, noted teacher—made possible, by his researches, most of the greatest advances in protein chemistry. His versatility and inspired imagination, coupled with a genius for experimental research, contributed basic knowledge of the greatest value to nutritional science. He did fundamental work on purines and sugars; laid the foundations of enzyme chemistry; and made stereochemistry a tool of research. He separated the amino acids from protein hydrolysates by his epoch-making distillation method; and not only ascertained many of the constituent amino acids of protein molecules but recombined them into synthetic peptides approximating natural substances, by virtue of his recognition of the peptide linkage.

His brilliant work brought him recognition from most of the important scientific societies of the world. The Royal Society awarded him the Davy Medal and elected him a foreign member, and in 1902 he became Nobel Laureate in Chemistry.

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THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

OKLAHOMA CHILD HEALTH SERVICES SURVEY

Featured at last week's annual meeting of the American Academy of Pediatrics was news from their nation-wide Survey of Child Health Services, now completed or nearing completion in 46 States. Academy members in Oklahoma start the Oklahoma Survey this month.

Post-war planning for child care has received much attention recently from many groups and individuals in the country, culminating in legislation now before Congress. The American Academy of Pediatrics, realizing that responsibility for such planning rests primarily in the hands of physicians themselves, has launched the Study of Child Health Services in order first, to gather necessary facts from which well-founded plans can be evolved, and second, to determine the extent and quality of services now available. Thus the physicians, unquestionably the ones who know what constitutes good care and who for the most part provide the care, have accepted the challenge to develop constructive plans for medical service to children.

One of the fundamental purposes of the present study is to stimulate local groups to discover for themselves the needs of their own communities and the facilities to meet those needs. Essentially, this means the collection on a vast scale of adequate and reliable data. Although the members of the Academy are committed to carry out the task, the success of this tremendous undertaking is the responsibility of individual physicians everywhere.

To obtain a complete picture of the existing child health facilities, data is being collected by questionnaires on the important aspects of pediatric and medical service: First, Hospital Facilities; Second, Community Health Services, Official and Voluntary; Third, Distribution, Qualifications, and Activities of Physicians and Dentists; and Fourth, Pediatric Education.

The Study in each State is under the direction of a member of the Academy, who, with the help of an Executive Secretary, has organized the program and correlated the many activities involved. The Oklahoma Study of Child Care Services is under the direction of Harold W. Buchner, M.D., State Chairman, and an Executive Committee including Ben H. Nicholson, M.D.; George H. Garrison, M.D.; Dean J. P. Gray, M.D.; George R. Russell, M.D.; Mack Shanholtz, M.D.; and Dr. A. C. Seids, representing the dental profession.

As all doctors are exceptionally busy now, procedures for obtaining the necessary information have been simplified. Every effort has been made to use available local sources, but certain essential data can be obtained only through the active participation of individual physicians. Specifically, the pediatrician will be asked to fill out the questionnaire dealing with his own training and practice; to supervise the completion of a questionnaire for one or more hospitals in his community; to send out prepared letters to designated practicing physicians informing them of the Study and requesting their cooperation in obtaining information on their pediatric practice; and to assist the Executive Secretary in his State in discussing the program with local, professional, and voluntary groups and health officers.

Physicians in private practice will be asked to complete a one-page questionnaire on their pediatric practice. A similar one-page questionnaire will be sent to all dentists.

This Study is important and unique. It is an opportunity for physicians, not only to investigate their own affairs, but also to collect factual data as a logical basis for sound medical care programs in the future. Unless the physicians undertake this task, others less well qualified will, as indicated already by the action of the federal legislators.

OLD AGE

In 1757 James Mackenzie[1] said, "To form any clear or connected judgment from these short and scattered hints, which may be gleaned among authors of remote antiquity, concerning the preservation of health, it will be necessary to distinguish four periods of human life, to each of which a peculiar care is due with regard to health, namely, childhood, youth, manhood and old age. . . . Of these four periods, the Gerocomice, or care of old age, is the only one (so far as I know) taken notice of before Pythagoras."

In the light of present trends with mounting interest in geriatics (healing of the old) this is an interesting observation. According to Mackenzie the "earliest instance we meet with of the Gerocomice, is the care which King David's servants took of him, when he was old and stricken in years, by getting a healthy young virgin to lie in his bosom, which was a very proper means to warm and cherish him; and which (when kept within the bounds of innocence and decency) is justified by the opinions of Galen, Paulus Aegineta, lord Verulam and Boerhaave. . . .

"Boerhaave frequently told his pupils, that an old German prince, in a very infirm state of health, being advised to lie between two young virtuous virgins, grew so healthy and strong, that his physicians found it necessary to remove his companions."

Homer was acquainted with the needs of the aged and in the last book of *The Odyssey* Ulysses tells his father Laertes that "warm baths, good food, soft sleep and generous wine, these are the rights of age, and should be thine". Galen in the Second Century A. D. gave "the poet's rule" his hearty approval.

Having quoted Mackenzie's reference to Boerhaave it is appropriate to see what he thought of the aging process and what he said in his famous lecture on "Diet for Longevity".[2] "A healthy human body is gradually so changed by the Actions inseparable from Life and Health, that the smallest Fibres become rigid and immoveable and the minutest Vessels grow together into solid Fibres, no longer previous to the Humours, while at the same time the larger Vessels become harden'd, contracted, smaller, and all Parts shrink together become more compact, grow to each other, and thereby occasion the Dryness, Wasting, Immobility and Insensibility remarkable in old people. By these Means the Offices of the smallest Vessels are destroyed, the Humours stagnate and thicken in them, concrete together, and with the Sides of their own containing Vessels; whence the Body is deprived of its most subtle Juices, the connoting Powers are weaken'd, the Wasting of the Body ceases to be repaired, and the grosser Humours only continue to flow slowly through the large Vessels; whence Life is in a manner barely supported alone, without the animal Actions; till at length from these Changes, consequent of Health itself, Death from a mere old Age becomes inevitable."

We are startled by the sad truth of Boerhaave's observations yet our present mode of living has doubled longevity in the United States since colonial days and brought under the scope of this aging process many who otherwise would have escaped the threats of senility through an early death.

The old age group is pyramiding by leaps and bounds. The aged not only participate in our changing social order but their presence initiates social and economic changes which carry serious health hazards. Since people who live beyond the age of fifty must grow old and since the healing of the old is difficult, everything possible should be done to keep them happy and well. What they need and want more than anything else is an opportunity for useful employment and the resulting independence. Enforced idleness leads to discontent, psychological imbalance results and physical disability is apt to follow. Our social and economic conditions, including urbanization of our populations and age retirement in industry, should be studied with reference to the aged. Between the time of forced retirement and the period of helpless senility there must be something better than old age pensions.

1. *The History of Health and The Art of Preserving It.* James Mackenzie. Edinburgh: Printed and sold by William Gordon. 1758.
2. *Academical Lectures on the Theory of Physic.* Hermann Boerhaave. London: Printed for J. Rivington, R. Baldwin, et al. 1757.

THE VALUE OF THE UNDISCOVERED

Our present knowledge is insignificant when compared to the undiscovered secrets of nature. Through medical progress based upon scientific discoveries we have managed to keep the ship of civilization off the rocks. The Oklahoma Research Foundation is planning to carry the compass. The worldly possessions in the hands of doctors have come chiefly through the march of science from laboratory to patient. The doctor who would preserve his medical and material competency must join the march of science by contributing to the Oklahoma Research Foundation.

SCIENTIFIC ARTICLES

THE DIAGNOSIS AND TREATMENT OF CARDIAC EMERGENCIES*

FELIX R. PARK, M.D., F.A.C.P.

TULSA, OKLAHOMA

When confronted with an emergency call for a heart attack, almost immediately numerous conditions which one might encounter are brought to mind. It is not always possible to establish a diagnosis and institute the proper therapy without difficulty. However, it is very essential that the situation be surveyed most carefully, including an accurate history and an adequate physical examination, since improper treatment at such a time could be disastrous to an individual in cardiac distress.

At this time some of the cardiac emergencies will be enumerated, their cardinal diagnostic criteria outlined, and the therapy indicated. These conditions will not necessarily be those of an organic nature, but also some of functional origin that produce alarming symptoms, and for which medical aid is sought in great haste. The cardiac emergency may vary from a mere palpitation in an emotionally unstable person, to one of heart failure.

The tachycardias constitute a group of disorders, either on a functional or an organic basis, which require frequent attention. The instance may be a simple sino-auricular tachycardia, a paroxysmal auricular tachycardia, a tachycardia associated with auricular fibrillation or auricular flutter, or the more serious forms arising in the ventricles and which may terminate in ventricular flutter or ventricular fibrillation. More rarely a tachycardia may occur from impulses originating in the A-V node.

SINO-AURICULAR TACHYCARDIA

In sino-auricular tachycardia impulses originate in the normal sinus node, but owing to the removal of the parasympathetic inhibition controlled by the vagus nerve, or due to sympathetic stimulation, the rate is in excess of 100 in adults, 120 in children, or 150 in infants. Not all instances of sino-auricular tachycardia are operative on this basis but may be also physiological in origin, such as that associated with effort, excitement, pathological states such as infections, thyrotoxicosis, shock, infarctions, etc., or post-prandially.

The diagnosis as a rule is not difficult and if any doubt exists the electrocardiogram is a valuable adjunct in arriving at the correct conclusion.

Treatment depends on the underlying cause. If it is associated with myocardial failure then digitalis may be of help by increasing the cardiac tone, and compensatory slowing in rate may follow improvement from its administration. Digitalis in therapeutic amounts causes little or no slowing of the heart. Neither is quinidine effective in sino-auricular tachycardia. If a nervous element is a large factor in the production of the accelerated cardiac rate, then sedation is indicated and is effective.

AURICULAR PAROXYSMAL TACHYCARDIA

The paroxysms of auricular tachycardia are frequently very ephemeral and the physician is not called until the spell is over. Or if his attention is sought during the episode he, as a rule, arrives after the paroxysm is over. On occasions such an incident may be prolonged and quite alarming to the patient and those about him. It may arise in individuals of all ages, most often in adults. Most paroxysms of this type occur in normal individuals following excitement, undue effort, excessive use of tobacco, or they may follow thyrotoxicosis and cardiac disease, especially mitral stenosis.

Usually the diagnosis is not difficult and is made without an electrocardiogram. The

*Presented before the Section on General Medicine of the Oklahoma State Medical Association, at the Annual Meeting, May 3, 1946.

onset of the tachycardia is sudden and the cessation is equally abrupt. The initial cardiac rate may not be attained immediately after the attack has ceased, owing to the residual excitement and nervousness incident to the experience. The spell may vary in duration from a few minutes to a few hours. If prolonged an electrocardiogram should be done. The P waves are abnormal in contour, ill defined in lead I, abnormal, upright, and occasionally inverted in lead II, of various shapes in lead III, and indescript in the usual precordial leads. The QRS complexes may be normal, or slightly or markedly aberrant. The rate varies between 160 and 200, and in infants can rise to 300 or more.

The condition is not a trivial one to be dispensed with lightly since in some instances, if prolonged, and if superimposed on a preexistent heart disease, cardiac embarrassment and even death may supervene. In mitral stenosis the pulmonary circulation may become embarrassed with the production of dyspnea, pulmonary edema, cardiac asthma, and even death. In cases of hypertension, aortic valvular disease, or myocardial infarction with left ventricular strain, left ventricular failure with pulmonary edema may be precipitated. Also, in cases of recent myocardial infarction, a status anginosus can result.

In the care of patients with paroxysmal tachycardias one should not be overzealous in taking the blood pressure, since with the inefficient circulation in the extremities a thrombosis of the vessels might occur.

Ordinarily the treatment of paroxysmal auricular tachycardia is transient, requiring only rest and reassurance of the patient, for a great majority of these cases are neurogenic in origin, occurring when there is nervous instability and following emotional disturbances. Often the spell subsides on mere change of position, or by firm pressure or massage of the carotid sinus, more effective on the right side of the neck. If the attack is prolonged the treatment must be modified, both from the standpoint of prevention of recurrent seizures and the cessation of the immediate one: quinidine sulphate in 3 to 6 grain doses, repeated at two hour intervals, two or three times, and continued in 3 grain doses four times daily for a day or two after the cessation of the attack. If the attack is so severe as to cause extremely rapid cardiac action, anxiety, and dyspnea, with prostration bordering on true shock and not responsive to the above methods, then the parenteral administration of quinidine or quinine is indicated. The latter may be given in the dosage of 7½ grains of quinine dihydrochloride, intramuscularly, at two-hour intervals. Quinidine sulphate may be administered by the drip method using a 10 per cent solution, with 50 to 60 grains dissolved in 500 cc. of a 5 per cent glucose solution or normal saline. This is given at the rate of 100 to 120 cc. per hour until a normal heart rate is restored or cinchonism occurs.[1] At times the administration of 2 to 4 drachms of syrup of ipecac, repeated in two hours if necessary, proves effective in stopping the paroxysm through its vagotonic action and production of vigorous emesis. Mecholyl (acetylbeta-methylcholine chloride), 20 to 50 milligrams injected subcutaneously, can be employed in the very obstinate cases. Atropine sulphate (1/60 gr.) should be at hand to be used as an antidote if the reaction is too severe.

AURICULAR FLUTTER

Auricular flutter is as a rule associated with heart disease, although it may occur in normal individuals. It is not common, but when present it produces alarming symptoms so that the physician is called upon to attend an emergency. The cardiac rate is about 150 per minute and the rhythm regular. In this condition the auricules contract regularly at a rate of 200 to 350 beats a minute owing to a circus rhythm in the auricles which follows a constant path. The ventricular rate is most frequently one-half of the auricular rate, and only rarely does a 1:1 rhythm exist. When carotid pressure is employed a marked slowing of the ventricles ensues temporarily and the ventricular rate may be one-third or one-fourth that of the auricles. This will suggest the diagnosis which can be easily confirmed by an electrocardiogram. When carotid pressure is applied the rhythm might become extremely irregular.

This condition responds to therapy very readily, digitalization being the measure of choice, and this can be accomplished by the administration of digitalis or one of the glycosides of digitalis. As soon as normal rhythm is established then digitalization is discontinued unless auricular fibrillation, or cardiac insufficiency supervene. Quinidine is not as effective as digitalis although normal rhythm is restored in some cases. Carotid sinus pressure is not effectual since it merely slows the rate, the pulse may become irregular and then the rate returns to the original one.

PAROXYSMAL AURICULAR FIBRILLATION

Usually auricular fibrillation occurs in individuals with organic heart disease, e.g., rheumatic heart disease with mitral stenosis, thyrotoxicosis, and hypertensive heart disease with coronary involvement resulting in infarction. However, it appears infrequently in normal individuals following excessive fatigue, tobacco, infection, and general debility. In this condition the mechanism of production is thought to be similar to that in auricular flutter, with the circus wave proceeding at a more rapid and irregular rate, and the ventricles responding irregularly at a rate of approximately 120-150 per minute. The paroxysmal type of auricular fibrillation is found with greater frequency in the aged.

The diagnosis should be suspected when encountering a rate of 120 per minute which is irregularly irregular. However, the confirmatory evidence can be readily obtained by taking an electrocardiogram.

Treatment of this condition is similar to that of auricular flutter. When a patient is seen shortly after the onset of the attack, quinidine should be given, 3 to 6 grains every two or three hours under close observation, and with electrocardiographic control when available. As improvement progresses one should watch for slowing of the auricular rate, and also for the development of toxic signs, e.g., bundle branch block. If quinidine proves ineffectual or the patient cannot tolerate it, then digitalis should be used. If cardiac failure, or status anginosus supervenes, then morphine sulphate and oxygen must be employed.

In normal individuals paroxysmal auricular fibrillation may readily respond to the treatment, or subside spontaneously with rest and never recur. However, if it occurs where the heart is damaged it might persist and the patient may carry on well under digitalis control for many years, or it could subside only to reappear at intervals. If there is considerable underlying cardiac damage the initial attack can result in cardiac failure and death within a few hours.

A-V NODAL PAROXYSMAL TACHYCARDIA

The symptomatology of this type of tachycardia is similar to that of the preceding conditions, and the treatment is the same as outlined for auricular paroxysmal tachycardia. Its occurrence is rare, and is diagnosed only by the electrocardiogram in which the P waves are inverted, and are either immediately before or after, or simultaneous with the QRS complexes.

VENTRICULAR PAROXYSMAL TACHYCARDIA

In ventricular tachycardia the impulses originate in the ventricles, and this as a rule is found in cases with extensive myocardial damage, or on the basis of some toxic condition such as digitalis poisoning. It is encountered usually in older persons, and rarely where there is a normal heart. Ventricular paroxysmal tachycardia is portentous and frequently appears as a terminal event following myocardial infarction. It may last a period of hours, and rarely for days or weeks.

The diagnosis is made with the aid of the electrocardiogram showing the rate of approximately 160 (150-250), with aberrant ventricular complexes; P waves, if recognized, are superimposed on the QRS complexes and T waves at times. When controlled the tachycardia stops as suddenly as it starts. The rhythm is regular but is disturbed by an irregularity and anisosphygmia during the attack. The rate is unaffected by carotid sinus pressure, large pulsations of the neck vessels are observed, and there is a slight difference in the intensity of the heart sounds.

The treatment must be energetic, and if it is suspected that the condition is caused by digitalis intoxication, this must be discontinued immediately. Quinidine should be administered and morphine should not be spared. Paredrine hydrobromide may be given if the above measures are ineffective.

VENTRICULAR FLUTTER AND VENTRICULAR FIBRILLATION

Ventricular flutter and ventricular fibrillation are occasionally encountered, and when present are terminal events. These attacks occur in severe myocardial damage, and if recovery takes place a fatal recurrence is the rule. When a patient is seen in an attack, with fainting, coma, and convulsions before death ensues, quinidine should be administered intravenously.

CORONARY OCCLUSION

Coronary occlusion is a rather frequent cause for urgent medical aid. The symptoms are dependent on the suddenness of the occlusion and the size of the vessel involved, being acute, severe, and alarming with a sudden closure. Death may result within several minutes to a few hours when a large vessel is occluded. The patient complains of a sudden and usually localized pain in the lower sternum or epigastric region, frequently mistaken for indigestion. The pain increases and

involves the entire sternum and precordial region, and may radiate to the left arm or in some instances the right. Atypical referred pain may occur in the neck, jaw, back, the entire chest, or the abdomen. The pain is excruciating, vise-like, and oppressive, cutting off respirations, and is not relieved by nitrites. The victim is terrorized and has apprehensions of impending death. He is restless, tosses about in bed trying to assume a comfortable position, or paces the floor. Shock prevails, the skin is cold and clammy, and beads of perspiration are obvious on the brow. The heart rate is rapid, there is a lowering of the blood pressure, muffling and impurity of the first heart sound, and a transient pericardial friction rub develops over the area of infarction. When the patient is seen without delay there is no hyperpyrexia, but a fever develops gradually and subsides after a few days. Likewise, a leukocytosis ranging from 10,000 to 20,000 follows and persists for several days. If myocardial failure results then symptoms of cardiac failure appear, namely, dyspnea, cyanosis, engorgement of the pulmonary circulation with consequent pulmonary edema, congestion of the cervical and cephalic veins, enlargement of the liver, ascites, and dependent edema.

The electrocardiogram is invaluable in confirming the diagnosis of coronary occlusion, and the changes found in the record are dependent on whether the anterior or the posterior coronary artery is involved. It is interesting to note that the mortality from a posterior myocardial infarction is not much less than from an anterior involvement, 30 per cent and 36 per cent respectively (Levine).[2] In this disease the physician will be harassed by apprehensive relatives regarding the prognosis and he will find it impossible to render an accurate estimate as to the final outcome. A prognosis in coronary occlusion must always be guarded, even though the patient appears well and protests that he is in good health once the acute attack is over. Nevertheless, the more major the abnormalities, the worse the prognosis. In the acute seizure morphine sulphate, or one of the other narcotics, should be administered and repeated as needed. A half grain of morphine sulphate, or 1/16 grain of dilaudid subcutaneously, can be given and repeated within three or four hours should the severe pain persist. Mental tranquility is imperative and sedatives are prescribed to remove anxieties, apprehension, and to promote sleep. Strict bed rest must be enforced for at least five or six weeks and this precludes the use of the bath room or the commode. Assistance must be given in all things, even in feeding, for the first ten days. The diet should be light, consisting mainly of liquids with the caloric value derived mostly from carbohydrates, and it can be gradually increased as improvement progresses. Good elimination is necessary, and if constipation is present, then mild laxatives and oil retention and plain water enemas are indicated. Digitalis is contraindicated, since by decreasing the cardiac rate and increasing the power of the ventricular contractions the infarcted area may rupture, or the ventricular wall may develop an aneurysm. If paroxysmal dyspnea exists then 50 cc. of 50 per cent glucose is given and oxygen administered.

HEART FAILURE

In acute heart failure the victim is sometimes seen in the initial attack, but usually he has been under a doctor's care and the incident is expected. This requires sound judgment and the most careful management. Previously the patient might have been considered a "good cardiac," but suddenly developed congestive failure owing to an intercurrent infection, a pulmonary infarction, undue effort or excitement, one of the previously discussed disturbances of rhythm, or post-operatively. In this condition the heart is incapable of doing the work demanded of it, and as a result there is a damming back of blood in either the pulmonary or the systemic circulation. The former is referred to as left sided failure (pulmonary vascular congestion), while the latter is right sided failure (systemic venous congestion). It is possible to have pure forms of either type but in chronic heart failure with an acute episode, a combination of both forms is the rule. When the whole heart is involved both forms are present. Dr. Paul White[3] has very succinctly distinguished the causes of congestive heart failure by classifying them as those arising from myocardial failure, and those brought about by obstructive phenomena. Left sided failure results from myocardial causes that place a burden on the left ventricle, such as aortic valve disease, hyperpiesia, coronary disease with myocardial infarction or ischemia, infectious myocarditis (particularly rheumatic fever), beri-beri, thyrotoxicosis, extreme tachycardia, anemia, and mitral insufficiency. Right sided failure develops from myocardial causes that produce a right ventricular strain, such as that following a chronic left ventricular failure, mitral stenosis, pulmonary fibrosis or endarteritis, pulmonary valve disease, infectious

myocarditis (chiefly rheumatic), malnutrition, anemia with fatty infiltration, and tricuspid regurgitation. The obstructive causes for a right sided failure are tricuspid stenosis, and acute or chronic constrictive pericarditis.

The signs and symptoms of left sided failure are dyspnea with effort, or paroxysmal dyspnea, which may or may not be associated with asthma, occasional cough, and blood tinged frothy sputum, and this necessitates differentiation from intrinsic pulmonary disease or bronchial asthma. The heart is enlarged; the patient is fatigued, orthopneic, and cyanotic; basal rales are heard, a gallop rhythm is usually found, and generally murmurs are present. If this condition continues right sided failure supervenes with subsequent upper abdominal discomfort from hepatic congestion, engorgement of the cervical veins, and hydrothorax, ascites, and dependent edema develop. The venous pressure becomes markedly increased and the circulation time is prolonged. A simple method of estimating venous pressure is to place the patient in a sitting position and hold the arm in a dependent position so that the superficial veins become filled. The arm is then raised to the level of the right auricle and the duration required for the disappearance of the venous engorgement is noted. Normally the veins empty promptly, but when the venous pressure is increased the engorgement frequently remains until the extremity is raised above the zero pressure level, or the level of the right auricle.

Intelligent and expeditious handling in the case of cardiac failure is imperative. If there is pronounced pulmonary edema then tracheal bronchial aspiration, by means of a catheter and suction, may be necessary to prevent fatal anoxia. Oxygen must be given in as nearly 100 per cent atmosphere as possible to relieve the deficient arterial oxygen saturation of the blood. This is best done by the oronasal mask, or if this is not available, the intranasal catheter. Congestion and edema of the lungs is diminished by application of tourniquets to all four extremities, thus trapping venous blood in the periphery. This causes decreased filling of the right side of the heart with consequent lessening of the left ventricular load, and the resultant reestablishment of equilibrium in the pulmonary and systemic circuits. Venesection or phlebotomy have a similar effect, the amount of blood withdrawn being determined by the indications in each case. A large needle should be used and the blood withdrawn rapidly, the quantity varying from 250 cc. to 500 cc. This procedure is contraindicated in severe anemia, and if done repeatedly an anemia is likely to be produced.

Morphine, gr. ¼ or 15 mg., is one of the most important drugs in the treatment of cardiac failure. It allays the great anxiety of the patient, interrupts the pulmonary reflexes, suppresses the cough, and causes the marked sudoresis and pallor to vanish. The blood pressure then returns to normal, the increased parasympathetic tonus is alleviated by atropine sulphate, and the cardiac asthma greatly subsides. It is in these cases that the intravenous administration of crystalline glycosides of digitalis, as digilanid C or lanatosid C, 1½ to 2 mg., or strophanthin ½ mgm., is indicated. Strophanthin should not be given, however, if the patient has received digitalis within the two preceding weeks. Digitoxin (Digitaline Nativelle) is an excellent form of digitalis to employ in emergencies and for a digitalis body, it is unique in that it is completely absorbed from the intestinal tract. Therefore, the oral dose for full digitalization is almost identical with the intravenous dosage, 1.25 mg., or a total of 3 cat units, which is equivalent to 15 cat units of digitalis leaf or tincture.

ADAMS-STOKES SYNDROME

Adams-Stokes syndrome is most terrifying to the patient and those present when it occurs, especially the severe form. Various gradations of the symptom complex are evident, ranging from mere consciousness of a slow forceful beating of the heart, to giddiness, faintness, unconsciousness, muscular twitchings, convulsions, and even death. The seizures are precipitated by a complete heart block and delay in development of an idioventricular rhythm by the ventricles, so that a cerebral ischemia results from a prolonged ventricular diastole. The administration of epinephrin subcutaneously or intracardiacally when the heart stops beating is indicated as a heroic measure. Previously barium chloride and thyroid extract were used prophylactically, but belladonna, and especially ephedrine and epinephrine have been found most suitable. Paredrine hydrobromide has been used also. These drugs act by preventing a stoppage or slowing of the idioventricular pacemaker which produces the attack. Epinephrine in oil, ½ cc. intramuscularly, is an excellent means of establishing a reservoir that can be massaged whenever absorption is desired. It may be injected twice daily when the spells are frequent, or atropine, or subcutaneous epinephrin, every two to four

hours may be given. Caution must be used with epinephrin since it must be definitely established that a block is the cause of the "Adams-Stokes" attack, and not a paroxysmal tachycardia, in which case epinephrin would be hazardous.

CAROTID SINUS SYNDROME

It is well to mention here the carotid sinus syndrome, especially since recently it was discovered that some high school students were attempting to "hypnotize" others by pressing on nerves in their necks thereby producing "brief black-outs." This practice is dangerous, especially when an over-irritability of the carotid sinus exists, and should be stopped at once. Spells of dizziness, fainting, and occasionally convulsions may occur as a direct result of such a procedure. During the attack there is a fall of the arterial pressure, and a pronounced slowing of the cardiac rate, or even a sinus standstill. In individuals with a hypersensitive carotid sinus the attacks may follow without any apparent cause, or after merely turning the head to one side or the other, or subsequent to an emotional upset, or by pressure over the carotid sinus by a neighboring lymph gland or tumor, etc. In elderly sclerotic persons contralateral hemiplegia or mental aberration may result.[4]

Carotid sinus irritability occurs more frequently in those with arteriosclerosis or hypertension, but may be present without such changes. In testing for carotid sinus irritability pressure should be exerted over the common carotid artery at its bifurcation, where a local prominence of the artery is found. The pressure should be applied for about twenty seconds, first on one side, then the other. A positive result is accompanied by syncope usually with fall of blood pressure or slowing of the heart.

Syncope resulting from carotid sinus irritability may be prevented by the administration of 25 to 50 milligrams of ephedrine sulphate, two to four times a day. At times atropine or tincture of belladonna (10 drops three times a day) may inhibit the attacks. If the cause is a tumor, local excision is the treatment. Resection of the nerve plexus from the carotid artery has been found to be curative in a few cases.

In this paper the more common cardiac emergencies have been presented with their most pertinent diagnostic criteria, and the immediate indicated therapy given.

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SULFONAMIDE ANURIA*

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Renal complications that develop during the administration of the sulfonamide compounds occur all too frequently, despite warning as to their danger. It is well known that adequate fluid intake and alkalization will prevent the majority, but too often this is neglected or even impossible to accomplish. Climactic factors will negate to a large extent such precautionary measures.

In the tropics crystalluria and hematuria were a very common disability, a clinical phenomenon observed by many medical officers who practiced urology in the Pacific. Undoubtedly the heat and humidity produced an excessive dehydration and resultant oliguria that favored the formation of urinary crystals. Probably for this reason the administration of the sulfonamide compounds in these areas was followed by a higher incidence of precipitation of sulfonamide crystals than that observed in the more temperate zone. Parallel to this, in our middle west in summer as the weather approaches equatorial temperatures, I believe we can expect a rise in incidence of renal complications with sulfonamide therapy unless precautionary care is exercised.

During a two-year tour of duty in the tropics, I saw many instances of sulfonamide reactions of the kidneys. In one hospital I found it necessary to perform ureteral catherization on twenty-four such patients to reestablish urinary drainage. In two instances pyelostomy was resorted to because of failure to catheterize sulfonamide packed ureters. It is noteworthy that of these twenty-four cases, all but five gave a history of sulfadiazine administration.

It is my impression that sulfadiazine is the more dangerous drug as far as production of renal complications. This observation has further been substantiated from personal experience gained from the treatment of gonorrhea in an active venereal ward prior to the era of penicillin therapy. In this particular hospital, sulfathiazole was the drug of choice for the routine therapy for this disease. When failure was encountered with sulfathiazole a change would be made to sulfadiazine or sulfapyridine. Frequently these preparations, of which sulfapyridine was the worst offender, would produce hematuria, in contrast to the relative nontoxicity observed from sulfathiazole administration.

Renal complications following the use of sulfadiazine usually manifest relatively early, that is, within the first five days. The first sign of upper urinary tract sulfonamide crystalluria is blood in the urine. At first in microscopic degree, it soon becomes a gross hematuria. Loin pain and abdominal distress along the course of one or both ureters is a symptom that signifies ureteral irritation and possible urinary blockage of the tract. This may be followed by the observation by the patient that less urine is being passed per bladder. If ureteral obstruction is complete and prolonged, the intensity of the loin pain is increased and the patient becomes more toxic with nausea and vomiting. Typical uremic symptoms may develop with delirium and coma followed by death unless urinary function is restored.

In the majority of instances the pathology of sulfonamide blockage is not unlike that of any other type of calculous disease producing ureteral block. The site of the obstruction is most commonly in the lower third of the ureter, particularly the intramural portion. It consists of an agglutinated mass of crystals and blood in a plastic cast of the ureter that completely dams the free passage of urine into the bladder. When one is able to pass by this obstruction with a catheter it will be discovered the accumulated urine above this obstruction will flow from the catheter relatively clear and under pressure.

The treatment of sulfonamide anuria is fundamentally preventive. Such crisis may be prevented by an adequate fluid intake to assure an output of over 1500 cubic centimeters fluid daily and sufficient alkalinizing

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agents to maintain a hydrogen ion concentration on the alkaline side. However, in some individuals there seems to be a tendency toward renal precipitation of sulfonamides despite such precautions.

When actual anuria occurs it is absolutely necessary that cystoscopic examination be made and an attempt to facilitate drainage by ureteral catheterization. Usually one will observe the ureteral orifice swollen, hemorrhagic, and surrounded by bullous edema. The crystalline mass may be seen extruding from the orifice as a dark grayish substance. In most instances one can thread a catheter by or through this accumulation and the acute hydro-ureter and hydronephrosis is immediately relieved. Obviously one should allow this catheter to stay in as a temporary drain until the sulfonamide accumulation in the body tissues has been eliminated. Frequent irrigation with warm water will usually keep the catheter open.

When both ureters are blocked, an attempt should be made to catheterize both sides. Although desirable, it is not urgent to pass catheters up both sides. If the kidneys are normal in function, one side often will effectively take care of urinary function for the time being. The other will spontaneously unblock itself of the crystals in time.

Occasionally ureteral catheterization is impossible, the ureter being so densely packed with material that despite repeated manipulations catheters cannot be passed to the renal pelvis. In such instances pyelostomy or ureterostomy is the only solution. Anuria that continues over forty-eight hours is an indication to consider surgical intervention. The operative procedure is simple. The distended pelvis and upper ureter is exposed through the usual loin incision. There is no necessity for mobilization of the kidney. An incision in the pelvis or upper ureter will relieve the pressure, and a large ureteral catheter threaded through this incision, into the pelvis, will temporarily maintain urinary function. Only one side needs to be operated as this will be sufficient to maintain urinary function. After a few days it will be discovered that urinary flow from the opposite kidney will spontaneously be restored. Temporizing measures in the face of total anuria are dangerous. Surgery should be resorted to before the uremia becomes severe and the patient critically toxic.

BRUCELLOSIS IN CHILDREN*

G. R. RUSSELL, M.D.

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In 1887 Sir David Bruce,[1] an English bacteriologist, isolated an organism from the blood stream of two patients on the Island of Malta. He termed this organism "Micrococcus melitensis" and by animal inoculation was able to make it fulfill all of Koch's postulates. This and subsequent work definitely established the organism as the etiological agent for outbreaks of protracted remittent fever on the island and in other localities of the Mediterranean area.

In 1897 Bang, a Danish veterinarian, discovered an organism termed by him "Bacillus abortus" and established it as the apparent cause of infectious or contagious abortion of cattle, also called "Bang's Disease." These organisms were isolated from the fetuses and uterine discharges of cows that had aborted and were definitely established as the cause of the disease. As time has passed, this disease has been found second only to tuberculosis in its seriousness among cattle, and also affects goats, sheep, and hogs in the United States.

Since Bruce had discovered a micrococcus and Bang a bacillus in two widely separated parts of the world, no one suspected for many years that there was any connection between the two. In 1918, however, Evans,[2] working with the bacteriological flora of milk in the Hygienic Laboratory at Washington, discovered that these two organisms were indistinguishable morphologically and culturally. Furthermore, the immune serum from either agglutinated both organisms and differentiation could be made only by means of

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agglutination absorption tests. Further work by Meyer and Shaw,[3] and other investigators, has shown that there are many strains of the organisms, but they may be divided into three main types on the basis of the animal infected. Since Bruce was the original discoverer, the term given to the group of organisms as a whole has been "Brucella" with additional designation for each variety or type: Brucella melitensis (goats), Brucella abortus (cows), and Brucella suis (hogs).

It is not unlikely that these three types of Brucella have a common origin and that specific biological or metabolic characteristics for each species have arisen as a result of adaptation to different hosts. The differences in the species must, however, be kept in mind by clinicians because they are frequently reflected in the severity of the disease and also in the results of therapy. In the experimental production of the disease in human volunteers, Morales and Ottero found only two doses of the suis strains were required to produce infection by ingestion, whereas seven consecutive doses of a highly virulent abortus strain resulted only in a mild infection. Of the forty volunteers, ten contracted brucellosis, six through the abraded skin and four by ingestion.

While cattle, swine, and goats constitute the large reservoir for Brucella, other animals are known to be naturally infected. These include sheep, horses, mules, deer, buffaloes, dogs, rabbits, and poultry. It must also be remembered that each of the species may reside in hosts other than that for which it is named. Thus an epidemic of human disease due to Brucella suis has arisen from the ingestion of raw cow's milk.

Although human beings may excrete viable Brucella in the feces or urine, no authentic human-to-human infection has been recorded, according to Spink and Hall.[4] Brucella organisms have been recovered from the milk of a nursing mother. Biting fleas and mosquitoes have been shown to transmit the disease experimentally, but no natural spread has been traced to this source. Another possible route of infection is through the respiratory tract following the inhalation of dust containing Brucella. Micro-organisms may remain viable in shaded dust or soil for two months. Monkeys have been experimentally infected following the inhalation of dust containing Brucella melitensis. Brucella organisms have been found to be viable after two months in Roquefort cheese, four months in refrigerated butter, and ten days in refrigerated milk. Brucella suis has withstood refrigeration in hog spleens at —10 degrees F. and in meat-curing brine for forty-five days.

Various observers have placed emphasis on one type or the other as being significant in the human disease. It is possible that Brucella suis in some reports is noted because it is cultured more readily. Of course, on the Island of Malta, Brucella melitensis gains the greatest importance due to the heavy ingestion of infected goat's milk. Spink and Hall, at the University of Minnesota Hospitals, show that all of the 35 cases reported were probably due to Brucella abortus. Twenty-two, or 63 per cent, of the patients consumed raw milk from infected cattle and seven, or 20 per cent, handled infected material from aborting cattle.

CLINICAL MANIFESTATIONS OF BRUCELLOSIS

The usual procedure in considering the clinical features of brucellosis is to divide them into acute and chronic phases based upon the time element involved. The acute stage is usually ushered in by temperatures which may either be high and sustained, as in typhoid fever, or intermittent, as in pyogenic infections. Such onsets may resemble acute respiratory infections or "influenza" or they may have intestinal symptoms and a diagnosis of "intestinal flu" is made. The acute phase may terminate the disease or it may continue on into a chronic phase. In other cases the disease may be insidious in onset and ill-defined symptoms persist over a long period of time. As Evans has pointed out, many of these chronic cases in adults have been diagnosed neurasthenia due to the multiplicity of physical and mental complaints with few or no localizing signs. These are usually the ambulatory type and are not sick enough to be considered bed-ridden and yet they are not well enough to be considered completely normal.

Still another group includes what are called the subclinical infections by Spink and Hall. These individuals have evidence of tissue sensitivity and serologic tests may reflect an invasion of the body tissues by Brucella. There are several reports in the literature of subclinical infections occurring in epidemics of brucellosis involving individuals who have ingested contaminated milk. These subclinical or ambulant cases may have a demonstrable bacteremia. It is possible that periodically these cases have more manifest forms of the disease and with more advanced methods of diagnosis may be recognized as active disease.

The cases to be presented today consist of 141 children varying in age from 15 months to 14 years. The idea of the search was suggested during the past two years by the letting down of the bars to raw dairy products due to rationing and a scarcity of red points, and by the presentation by the parents of the occasional child with symptoms similar to their own and diagnosed by one of my colleagues as probable ambulant forms of brucellosis. In general, with the exception of a very few patients which will be discussed later, they were not acutely ill and I, on occasions, wondered why they were there as often there was no demonstrable pathology.

HISTORY

SYMPTOMS IN 141 CASES OF CHILDREN WITH POSITIVE SKIN TEST FOR BRUCELLOSIS

Fever — 123 or 87%	
Vague Symptoms:	
Leg ache	50 or 45%
Gastro-intestinal	42 or 30%
Nervousness	20 or 14%
Swollen glands	18 or 13%

HISTORY OF RAW DAIRY PRODUCTS

88 CASES or 62% including 2 cases of raw goat's milk

Cases from small towns or rural communities	Outlying Sections of Tulsa
36	15

In 123 cases out of the 141 there was a definite history of fever usually not high (up to 99.5 or 100° orally) and occasionally up to 101 or 102° F. and usually of the remittent type. Vague pains of the skeletal system, chiefly leg ache and backache, were presented in 50 cases with headaches in 13. Forty-two cases gave a history of vague gastro-intestinal symptoms, usually pain not localized, and occasionally vomiting and diarrhea, but more often anorexia and constipation. There was a history of swollen glands in 17. There was a history of nervousness in 20. Eighty-eight cases gave a definite history of using raw or unpasteurized dairy products including milk, cream, and country butter; two, unpasteurized goat's milk. It was interesting, in connection with the history of unpasteurized dairy products, that 36 cases came from smaller towns and rural communities around Tulsa in northeast Oklahoma, and 15 from outlying districts of the city where it is common practice to keep a cow. The duration of the symptoms varied from a few weeks up to several months and a year or more.

PHYSICAL FINDINGS

The physical findings were also in general not remarkable. Several of the children had enlarged tonsils and adenoids but none were inflamed or obviously infected. Several also had positive tuberculin reactions, but x-rays of the chest showed no evidence of active lung disease. The cases presenting gastro-intestinal symptoms showed no localized tenderness or masses and x-ray series were negative for pathology when taken. There was a tendency for the group to be underweight, 47 showing an average of a minus seven pounds, according to the Baldwin-Wood standards. Eighty-three of the cases were males and 58 were females.

PHYSICAL FINDINGS AND LABORATORY

Anemia (Under 12 Gms. Hb. or Under 4,000,000 RBC)	66 Cases or 47%
Underweight	47 Cases or 33%
Average — 7 lbs.	
Sedimentation rate of blood: 109 Cases with average 25 mm. in 1 hr.	
Huddleson's Aggutination Test:	
Positive 42	Negative 62

AGE AND SEX INCIDENCE

AGE

Under 2 yrs.	*2 to 6 yrs.*	*6 to 14 yrs.*
3 or 2%	38 or 27%	100 or 71%

SEX

Male	*Female*
83 or 59%	58 or 41%

LABORATORY FINDINGS

Sixty-six cases showed some degree of lowering of hemoglobin determination below 12 gms. and RBC below 4,000,000. The blood sedimentation level was increased to an average level of 25 mm. per hour in 109 cases. (Normal 10 mm. per hr.) Huddleson's rapid agglutination for Brucella abortus was positive in varying degrees in 42 cases and negative in 64. Blood cultures were not run routinely, but were positive in two cases which were hospitalized and will be discussed later. The opsonocytopagic index was helpful in establishing the diagnosis in one case, but these also were not run routinely.

BRUCELLOSIS SKIN TEST REACTION IN 141 CASES

+	++	+++
66 or 47%	63 or 45%	12 or 8%

RESULTS OF VACCINE THERAPY IN 29 CASES

Degree of Improvement

Marked	*Moderate*	*Slight*	*None*
9 or 31%	11 or 37%	7 or 24%	2 or 7%

The brucellosis skin test was positive in varying degree in all 141 cases, which was the basis for the selection of the cases and was in turn done on the basis of the history and physical findings. The technique used was the intradermal injection of 0.40 cc. of a bacterial suspension of Brucella melitensis, abortus, and suis containing six billion killed bacteria per cc. and diluted with an equal amount of sterile normal saline. The reading was taken in 48 hours except in a few instances which appeared at the end of five days and was graded according to the size of the papule and surrounding erythema.

Sixty-six gave a + reaction, sixty-three a ++ reaction and 12 gave a +++ reaction. No ++++ reaction or necrosis appeared.

LOCALIZING SIGNS OF BRUCELLOSIS

The following is a list of associated conditions observed in this series of patients. The writer has not assumed that these conditions were necessarily due to brucellosis, but due to the protean manifestations of this disease, it must be considered as a possible, or, in some cases, a probable etiological factor.

OCULAR MANIFESTATIONS

One patient, nine years of age, was referred by an occulist because of blindness in the right eye. He described the condition as a large central area of chorio-retinitis responsible for the almost complete loss of vision. This patient gave a history of having consumed country or unpasteurized butter. He compained of headache, legache, and fever. His skin test for Brucella was positive and the blood sedimentation rate was 53 mm. in one hour. Following the second injection of Brucella vaccine, he developed a moderate degree of swelling of his left leg and ankle, and a temperature of 102° F. The swelling and fever lasted for two days and then receded.

A second associated eye condition was a diffuse bulbar and palpebral conjunctivitis and a hazel-nut sized enlargement of the regional lymph node over the left parotid gland, simulating the so-called Perinaud's conjunctivitis. He had consumed raw milk on a farm in Missouri, and ran periodic fever. His skin test was positive for brucellosis and his agglutination test up to a 1-80 dilution before treatment.

PULMONARY MANIFESTATIONS

Two cases in this series, brothers, developed high temperatures, cough, and physical and x-ray findings typical of virus pneumonia, with low white blood counts and failure to respond readily to penicillin or sulfonamide therapy. In view of the previous findings of a positive skin test for brucellosis, and the history of consuming raw milk on their farm, blood cultures were run during the hospital stay and Brucella abortus was isolated from the blood stream in one case.

LYMPHADENOPATHY

There was a vague history of enlarged glands in 17 cases, but lymphadenopathy was not an outstanding feature, nor was splenomegaly, with the exception of three cases. Two of these cases developed a large walnut-sized nonsuppurative area in the right anterior axillary area almost identical in location. One of these cases also developed a thrombocytopenic purpura and hematuria with diffuse hemorrhages into the skin and mucous membranes. His hemoglobin fell to 8.0 gms. and he had to be hospitalized for transfusions. His skin test was markedly sensitive to Brucella, his blood agglutination was positive in a high titer, and Brucella was isolated from his blood stream. With vaccine therapy his blood sedimentation rate dropped from 27 mm. per hour to normal in one month's time, his blood agglutination titer rose to an even higher level, and he has been free from symptoms for the past six months.

The third case showed several hazel-nut sized lymph nodes in both groins, but no generalized lymph node enlargement.

SKIN LESIONS

One of the cases which also had the Perinaud-like conjunctivitis mentioned above developed numerous pea-sized red papules on the extensor surfaces of both legs, which later became blue and then brown, typical of erythema nodosum. The coccidiodin skin test was negative. Two cases developed purpuric lesions, the one mentioned above, and one other less severe in nature.

SPONDYLITIS

One case, 21 months of age, gave the history of having "flu" four weeks before and failure to walk since then. He had been diagnosed a probable anterior poliomyelitis in another city. On physical examination, it was evident that he moved his legs readily and muscle tone and reflexes seemed to be normal, but the chief trouble was apparently pain and rigidity of the spine when he tried to stand or even sit. X-ray examination of the spine showed no apparent disease and the tuberculin test was negative. With the history of living in a rural community and consuming raw milk, a Brucella skin test was found to be decidedly positive and the Huddleson agglutination test positive in a 1-320 dilution. The child showed complete recovery with vaccine therapy.

JOINT MANIFESTATIONS

There were two cases of interest of this type. One, a boy of 12, came in with history of pain and swelling in both hands and both ankles, so that he could no longer milk the cows, and in fact, could hardly walk. He had been running some fever, and the salicylate test showed no improvement. There was a definite history of a cow losing her calf in

the herd which he milked, and his Brucella skin test was positive. His sedimentation test showed a level of 30 mm. per hour but his Huddleson reaction was negative. In view of the history and positive skin test, he was placed on vaccine therapy with complete recovery and is back milking the cows. An interesting feature about this case was that several months intervened during vaccine therapy before positive agglutinins developed in the blood and appeared much later than the evidence of clinical improvement.

The second case with joint manifestations might be called the enigma of this series. This boy is a farmer boy, raised on raw milk, and has been followed by the writer during the past eight years. He was first seen at the age of four and at that time showed large bilateral spindle-shaped swelling of both knees, splenomegaly and cervical lymph node hypertrophy, and was believed to belong in the group of chronic arthritis first described by Still. He has had numerous periods of exacerbations and remissions, and has required transfusions for secondary anemia. With the interest in brucellosis in the past year, a skin test was found positive for Brucella and his blood agglutination test was positive in a high dilution. His opsonocytophagocytic test showed a high phagocytic activity of his leucocytes. Despite prolonged vaccine therapy, he has recently had a remission with high temperature, chills, and diffuse sweating. These were apparently exaggerated by blood given for his anemia. He is at the present time under hospital observation. It would appear that sulfadiazine with a blood level of approximately 25 mg. per cent has shortened this remission. Penicillin for one week's time showed absolutely no benefit. The roentgenogram of this case showed the bones of the wrist to be rarefied and to have localized "punched-out" areas in the os lunati and os capitate. The knee joints, ankle joints, and hip joints showed signs of rheumatoid arthritis with rarefied bones and fine trabeculations. There were slightly irregular areas involving the superior and inferior surfaces of the bodies of the dorsal and lumbar vertebrae. There was thickening and haziness along both sacro-iliac joints. Another unusual feature of this case has been the diffuse dusky red appearance of the posterior pharynx with evidences of excessive lymphoid tissue and an almost constant hacking unproductive cough. The tuberculin test has been negative on several trials.

ALOPECIA

One case of this series was seen at the age of five and one-half years, presenting a history of complete alopecia for three years' time. During his later infancy he had been given raw goat's milk because of a suspected allergy to cow's milk. He had had periods of fever which had been called sinus infections, and his tonsils and adenoids had been removed. His skin test was positive for Brucella and the blood sedimentation level was 26 mm. per hour. He was given diluted Brucella vaccine twice weekly in increasing doses for three months' time, and the sedimentation rate dropped to 13 mm. per hour and agglutinins appeared in the blood for Brucella. There was a gradual reappearance of hair, and a complete crop of hair developed on the eyebrows and scalp.

VACCINE THERAPY

This report is entirely of a preliminary nature with regard to the value of vaccine therapy. A disease which is so insidious in its onset, and so prone to remissions, requires a longer period than the scope of these observations for lasting conclusions. The results as mentioned in some of the case reports have been very encouraging and at times startling. The policy has been to keep all cases on a control period of one or two months, observing the temperature, sedimentation rate, and physical signs. Where there has been a spontaneous improvement in these factors, it has not been recommended, as it is probable the natural immunological body factors are accomplishing the desired recovery as seems very common, if brucellosis is as wide-spread as it appears to be.

The technique for vaccine therapy when chosen was as follows: The same bacterial suspension used for the skin test containing six billion mixed Brucella abortus, melitensis, and suis organisms per cc. was diluted 1-1000, 1-100 and 1-10 times. The vaccine was given twice weekly starting with 0.1 cc. of the 1-1000 and increasing by 0.1 each time until the heaviest concentration had been reached. When reactions had occurred, the step-up was not continued. In the opinion of the writer, strong reactions recorded by many observers are not only not necessary, but probably not desirable.

The benefit of the therapy has been judged on the basis of improvement in the symptoms, in the fever, in decrease in blood sedimentation level, and in increase in blood agglutinins. In nine cases, there appeared to be a marked improvement and in 11 cases a

moderate improvement, in eight cases a slight improvement, and in two cases no improvement was evident. One of the cases showing no improvement was the chronic case of apparently several years' duration. It is possible that the eight cases with slight improvement will later develop increased blood agglutinins, in which case, the relative benefit could be considered increased on the basis of the present evaluation. Additional cases receiving therapy will be reported later. In cases which do not respond to the present vaccine, the use of Huddleson's filtrate brucellin will be tried.

MISCELLANEOUS ASSOCIATED CONDITIONS

Alopecia	1
Erythema Nodosum	1
Thrombocytopenia	2
Pneumonia	2
Nosebleeds	3
Osteomyelitis of rib	1
Perinaud's Conjunctivitis	1
Fainting Spells	2
Severe Arthritis	2

COMMENT

The writer is not prepared to contend at this time that all 141 cases here reported were active cases of brucellosis. But all 141 by the nature of their selection had a tissue sensitivity to Brucella vaccine as manifested by a positive skin test. The existence of evidences of infection in a high percentage of cases, as shown by physical signs and symptoms, by fever, and by high blood sedimentation level, is indisputable. The exclusion of all other known forms of infection, coupled with the high incidence of exposure to raw dairy products and the unity of the symptom complex, plus the tissue sensitivity to Brucella, make a good case for the establishment of the diagnosis of brucellosis. The final and conclusive test is the isolation of viable organisms from the patient's blood stream. A great many blood cultures are to be run, and it is interesting that in the past two weeks, three cases of the chronic or ambulant type of brucellosis of the garden variety have shown positive blood cultures for Brucella organisms which have been readily agglutinated by immune serum.

The Brucella skin has often been considered a form of allergy analagous to the tuberculin skin test, in which case, a positive reaction might indicate either present or past infection. As with the tuberculin test, the younger the individual showing it, the more likely its significance for present activity. Angle and others have found 9 per cent positive skin test for Brucella in 7,122 school children of Kansas City. When the group was analyzed to include only those in outlying districts of the city, the percentage rose to 18.

Benning,[5] on the west coast, has offered the postulate that the skin test for Brucella is not an allergic tissue sensitivity in the usual sense, but is analagous to the Schwartzman phenomena, and is due to the interaction of circulating endotoxin from living organisms in the body and the test substance locally. As further substantiation of his point, he shows the disappearance of the skin reaction at the time of recovery. This work requires further substantiation, but if proven, will make the skin test for Brucella an even more significant test for active disease.

CONCLUSIONS

1. Contrary to frequent expressions in the literature, it would seem that brucellosis is not an uncommon disease in childhood.

2. It is possible that war food rationing with increased consumption of raw dairy products has added to the incidence of the disease.

3. More stringent laws are necessary for the regulation of the sale and use of raw dairy products.

4. The blood sedimentation level has been found to be a valuable aid in following the activity of brucellosis infection.

5. The writer would suggest the investigation of the use of Brucella prophylactic vaccine, perhaps as a combination with typhoid and paratyphoid, as tried by Kolmer.[6]

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GASTRIC RESECTION FOR CARCINOMA OF STOMACH KRONLEIN TECHNIQUE*

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TULSA, OKLAHOMA

The views of the individual surgeons concerning the choice and the general technique of procedure in the various surgical diseases of the stomach and duodenum often differ materially, depending entirely upon the mechanical skill of the operator, the lesion in question, and the surgical procedure to be enacted. Many of the opinions expressed herein consequently may have a decided personal slant — not an expression of ego but an evolution, and a breaking down possibly, of several techniques in perfecting the procedure which I feel, in my hands especially, I am most capable of performing under certain conditions.

The circumstances which may be presented in any one given case may be entirely altered in the next clinically similar case although apparently both present the same surgical problems, and ultimately both must be operated toward the same end, that is, a perfectly functioning gastro-intestinal tract or as nearly perfect as reconstruction surgery can make it.

Resection is considered primarily in gastric carcinoma and in gastric ulcer. Opposed to resection, however, are the advocates of excision, gastro-enterostomy, and gastroduodenostomy or the simpler procedure of radical pyloroplasty with excision. All of these procedures do have definite places in gastric surgery under certain proven conditions, although, as a general rule, and in most instances, these operations are both inadequate and ill-advised. In those intractable and long-treated gastric and duodenal ulcers not amenable to conservative treatment, the operative procedure of choice is resection of the ulcer-bearing area of the stomach along with a fair portion of the duodenum. Gastro-enterostomy, excision, or any type of modified exclusion operation should not be considered.

Many difficult problems may be encountered, although where technically possible, ulcers of both the stomach and duodenum should be removed by resection. The resection should include at least one-third of the stomach and the pyloric antrum. This procedure has been adopted primarily due to the fact that where the pyloric antrum is not widely resected, there remains, theoretically at least, a stimulus to the acid-producing glands of the fundus which ultimately could lead to recurrent development of ulcer, especially in those patients having an ulcer tendency.

In all cases the Billroth (1) type procedure — stomach to the duodenum — would be the utopian surgical procedure. The gastro-intestinal tract would then be more nearly perfectly reconstructed. Unfortunately, and in face of our desire to do this, our past experience has shown that this can be done safely and satisfactorily in only a small percentage of cases. The pitfalls encountered in this procedure are evident. The fact that the posterior wall of the duodenum has no peritoneal covering makes suturing to this area hazardous. The stomach must be freed and prepared for such an anastomosis in such way that there will be no unusual tug on the suture line. This cannot always be done, especially where adequate resection must be employed. Consequently the operation of choice in most cases is some form of Billroth (2) procedure with certain modifications to suit the individual case. The technique of Kronlein as adapted to the Billroth (2) type resection has been most satisfactory in my experience.

The problem of reconstructing the continuity of the gastro-intestinal tract is of minor importance when compared to the resection of the lesion. The resection of the stomach, the removal of adjacent glands and clean excision of adjacently involved structures are, of course, of major significance. To satisfactorily complete both the resection and the final reconstruction operation requires not only an exacting knowledge of the anatomy and pathology involved, but also a visual mechanical instinct as to the proper

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physiological functioning of the completed procedure.

There are four fundamental factors which govern the operation wherein malignancy or a suspected malignancy involves the stomach, namely:

(1) Location and extent of the lesion.

(2) Extent of the glandular involvement of the gastrocolic and gastrohepatic omenta.

(3) Metastasis to the liver.

(4) Invasion of the retroperitoneal glands in the region of the head of the pancreas.

These problems must be dealt with systematically before any attempt is made to proceed with the operation.

In the first instance, if the lesion is high up on the cardiac end of the stomach, complete resection in all probability would be the surgical procedure of choice. The entire stomach can and is occasionally resected. In most cases, however, of a high gastric lesion, the symptoms have been so late in developing and the lesion has become so extensive that by the time the patient first comes under surgical consideration the case is actually inoperable, even though the general physical condition of the patient may appear to be very good. In the second instance, glandular involvement of one or both gastrohepatic and gastrocolic omenta, if not too extensive, can be successfully handled by wide dissection. This depends to a great extent on the skill, surgical judgment, and experience of the surgeon. In the third instance, metastasis to the liver definitely precludes anything more extensive than the simplest of palliative procedures.

The fourth factor taxes the skill, experience, and judgment of even the most seasoned upper abdominal surgeon. In this instance a fine knowledge of clinical pathology, a well-defined idea of the intricate anatomical problems involved, together with more than average surgical dexterity would be a handy acumen to readily determine what to do, or better, what not to do. Glands or masses of glands in this area that grossly cannot be removed are definite contraindications to a radical resection.

Once the above four factors have been definitely and satisfactorily disposed of and a resection has been decided upon, we must then elect the procedure to be followed. This in itself is not so simple. First a definite point must be selected for the gastric division. At this point both the gastrocolic and gastrohepatic omenta may be divided so that the stomach can be easily lifted forward. Working from the left side of the operating table, the surgeon can insert the index finger of the right hand through the original opening to the gastrohepatic omentum and thereby free the structures around the pyloric end and distal one-third of the stomach. This maneuver saves time in the resection and definitely precludes injury to the middle colic artery, which may be pulled closely against the posterior wall of the stomach following inflammatory reaction in this area. This greatly facilitates the further division of these structures, the gastrohepatic and gastrocolic omenta, which may be effected by multiple double ligatures or clamps as the surgeon prefers.

When the division of the gastrohepatic and gastrocolic omenta have been completed, the stomach is then divided between soft clamps. Both ends are cauterized with alcohol and covered over with protecting packs, exercising due care not to contaminate the field. The lower segment which is to be resected is then elevated so that a clear exposure of the posterior wall and structures beneath are in evidence. This procedure facilitates freeing the growth from the region of the head of the pancreas and augments freeing the first part of the first portion of the duodenum. If the duodenum can be successfully freed for at least one to one and one-half inches, then there is no reason why a satisfactory closure of this segment cannot be effected. I personally prefer the Furniss clamp method of closure of this segment, the clamp being applied perpendicular to the long axis of the body. The mucous membrane is then closed in such manner that the ultimate suture line is transverse to the long axis of the body, thus minimizing the unprotected area on the posterior wall which is not primarily protected with peritoneum. Three layers of intestinal chromic sutures followed by one layer of interrupted platted silk are used for this closure. An adjacent piece of peritoneum is then pulled over the stump which is then allowed to fall back to a normal position of rest.

The remainder of the procedure may be completed in one of several manners. A retrocolic or an antecolic anastomosis may be effected, although in most instances the antecolic procedure is the method of choice. The union with the jejunum is preferably isoperistaltic though an antiperistaltic anastomosis may be considered in some cases. The jejunal loop may be long or it may be short.

The short loop has been more satisfactory in our experience. If the operator prefers a long loop, then he should consider the advisability of an entero-enterostomy at the most dependent portion of the loop. Unless emptying is adequate it is entirely possible that the accumulated back pressure may be sufficient to disrupt the duodenal closure thereby resulting in a general peritoneal infection or, at the best, a duodenal fistula — a most trying surgical complication.

Having decided as to the most workable of the above procedures in each case, the operator then has the choice of several different types of anastomoses. The opening must be adequate and no attempt should be made to close such a portion of the stomach as will interfere with normal function. It is best to keep in mind that regardless of the size of the anastomosis the actual opening cannot exceed the diameter of the anastomosed intestine. Consequently, and in view of this fact, I have elected to use in practically all cases the Kronlein modification of the Billroth (2) procedure whereby the opening in the jejunal wall approximates the entire divided section of the stomach. This anastomosis may be effected by any one of four procedures, namely:

(1) The soft clamp
(2) The Wangensteen thin blade anastomatic clamps
(3) The open type anastomosis
(4) The Furniss aseptic anastomosis

Of the four, the Wangersteen forceps have proved most satisfactory due to the fact that the danger of contamination is lessened through a semi-aseptic type of anastomosis. The union between the stomach and the jejunum is effected by three layers of intestinal chromic sutures reinforced with one layer of interrupted silk.

Once completed the outlet is actually equal to the diameter of the jejunum at the point of anastomosis and not equal to the entire divided end of the stomach.

The technical advantages of the procedure are such that leakage from the suture line, hemorrhage from divided surfaces, or constricted stoma are not encountered. The continuous smooth line suture surface of the anastomosis lends to ease of repair, lessens the operative time, and is not conducive to oedema. Recent study has shown that the anastomosis is such that a rapid emptying through the gastric stoma with evacuation of the stomach contents into the efferent loop is satisfactorily effected. During the past few years, except in rare instances, the above operation has become a standard procedure on our surgical service.

CONCLUSIONS

Taking all factors into consideration, we are inclined to the opinion that:

(1) The procedure is readily adaptable to any type of subtotal gastric resection.

(2) It is a time-saving procedure.

(3) The stoma is adequate, being the full diameter of the anastomosed jejunum.

(4) Obstructive oedema, even in the face of hypoproteinaemia, is rare.

(5) Ease of suturing insures a tight, secure suture line.

(6) Functionability surpasses any other type Billroth (2) procedure which we have used.

(7) Acute angulation of the jejunum is less apt to occur, thereby minimizing the danger of peritonitis or duodenal fistula following duodenal dilatation and back pressure on the duodenal stump.

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RESPIRATORY INFECTIONS

The problem of the environmental control of acute respiratory infections received a considerable amount of attention during the war. It was shown by Robertson and his co-workers of the Commission on Airborne Infections that glycol vapors were highly effective in the sterilization of air. In fact, it was found that a concentration of as little as 1 Gm. of triethylene glycol in several hundred million cubic centimeters of air was lethal for the common pathogens of the respiratory tract and also for the virus of influenza. Further studies on this subject demonstrated that it was possible to exert a decided effect on the content of pathogens in the air of hospital wards or barracks by the proper oiling of floors and bed linen. It would appear that the use of these methods for the environmental control of acute respiratory infections may be of considerable value in cutting down the incidence of gross and secondary infections in hospital wards and in relatively closed institutions.

CLINICAL PATHOLOGIC CONFERENCE

University of Oklahoma School of Medicine

Presented by the Departments of Pathology and Medicine

VERN H. MUSICK, M.D. AND HOWARD C. HOPPS, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HOPPS: It is not often that we have an opportunity to consider the type of case which Dr. Musick will present today. We are fortunate too in that Dr. Musick has a special interest in this type of disease and further, that he followed this patient very carefully throughout his hospital course.

PROTOCOL

Patient: H. S., white male, age 26; admitted December 27, 1945; died February 27, 1946.

Chief Complaint: Frequent bloody stools, marked tenesmus.

Present Illness: The patient was a plumber's helper and as such, often worked in sewers. Six months prior to admission (eight months prior to death) he had an episode of loose stools which contained blood. Recovery was spontaneous. The present episode began 24 days prior to admission and was ushered in with sudden sharp cramping pain in the epigastrium following the drinking of a glass of water. The following day the stools increased to three or four per day from the usual one or two. The stools became spontaneous, and one night at 3:00 a.m., while on the way to the bathroom he passed gas per rectum and with this a four-inch piece of formless, soggy, clear, gelatin-like material containing blood. For the next week, the stools continued to increase in frequency reaching 15 or 20 per day, liquid in consistency and frequently containing blood. His appetite remained good and water ceased to incite pain. Cramping abdominal pain occasionally preceded the stools. He was then taken to the local hospital and given supportive therapy without improvement. The stools continued to increase in frequency, reaching two or more per hour and of the same character. As mentioned above, he developed progressive anorexia and lost an estimated 40 pounds in weight (from original weight of 182). Mild abdominal pain was also noted upon coughing. No other pertinent history was elicited.

Past History: Measles and repair of left inguinal hernia.

Physical Examination: Revealed a fairly well developed white male with evidence of recent weight loss. He was weak and unable to sit up for very long periods of time. Moderate pallor of the skin and mucous membranes was present. The temperature was 101°, pulse 108, and the blood pressure 126/60. The abdomen was somewhat distended and tympanitic. There was generalized tenderness, most marked over the LLQ. Rebound tenderness was also elicited. Only an occasional peristaltic movement was heard. The remainder of the physical examination was noncontributory. (Note: during the examination, the patient had a liquid stool consisting mostly of red blood with a few small clots and occasional shreds of feces.)

Laboratory Data: Urinalysis on three occasions was not unusual except for specific gravity ranging between 1.002-1.009 and a trace of albumin and innumerable pus cells with clumps on one occasion. The Mosenthal concentration test yielded 480 cc. of urine with a specific gravity of 1.019. The hemoglomin was 12 Gm. on admission, the red blood cell count 3.75 and the white blood cell count 7,550 with 68 per cent neutrophiles and 32 per cent lymphocytes. The hemoglobin varied between 7.5-13.5 Gm., R.B.C.'s between 2.35-4.62 and W.B.C.'s between 7,450-15,800 with equivalent differentials. The eosinophile count was normal, 0-3 per cent. Stool examination did not reveal ova or parasites on seven examinations (four warm stage ob-

servations). Gross blood was present in all stools examined at the laboratory, except on one occasion when the Guiacic test was also negative. The NPN varied between 12 and 40 mgm. per cent. Blood chlorides on one examination were 235 mgm. per cent. The total plasma protein was 4.5 ten days after admission. Two weeks later, it was 7.4 with an A.G. ratio of 3.3 4.1. Three weeks prior to death, it had dropped to 5.1. The sulfasuxadine blood level was less than 2 mgm. per cent on a single determination. The blood Mazzini was negative. Three blood cultures were negative. Agglutination for brucellosis was positive at a dilution of 1:320. Typhoid and para A & B agglutinations were negative. X-rays of the chest revealed no abnormality on two occasions and fluoroscopic examination showed a normal excursion of the diaphragm. A flat plate of the abdomen revealed marked distention of the transverse colon with no evidence of air under the diaphragm. A barium enema could not be performed on admission because of the profuse diarrhea. The report of an examination made three weeks prior to death was as follows: "There is a loss of haustrations of the entire extent of the colon with almost complete obliteration of mucosal pattern. Spasm of the sigmoid is present. These findings are in keeping with an extensive ulcerative colitis."

Clinical Course: The frequency of the stools remained unchanged after admission and the patient was placed on sulfasuxadine with no relief. Sigmoidoscopy revealed "punched out" ulcerations with fairly normal mucosa between the ulcers. The rectum was involved, but much less than the sigmoid colon. Following this examination, the patient was given a course of emetine and carbarsome with the note "stools are much less in amount and number." Nine days prior to death an enterostomy was performed to divert the intestinal contents from the diseased colon. The patient went into shock following the procedure, but recovered promptly following the infusion of plasma and 5 per cent dextrose solution. At the time of operation, a low grade fibrinopurulent peritonitis was found. Five days later, the patient complained to the nurse of pain in the chest. The next day, the Wangensteen tube became "plugged" with a "clot of blood" and later the returns from the gastric suction were "tinged with blood." Generalized abdominal discomfort and distention were progressive. During the evening prior to death, the temperature was 103.2° (R), pulse 120 and respirations 40. The face was flushed. The patient was apprehensive and disoriented at intervals. The pulse was noted to be irregular during this night. The following morning (day of death) the temperature was 101.6° at 8:00 a.m. and at 11:00 a.m. it was 104° (R). Pulse was 128 and respirations 30. The respirations increased in frequency to 48 per minute. The patient became cyanotic; his pulse was weak and thready. Perspiration was profuse and the patient was completely irrational. Metrazol, coramine, ephedrine, and caffeine sodium benzoate were all used with no results and the patient expired (62 days following admission to the hospital). During the course of hospitalization, the patient received 28,000 cc. of 5 per cent dextrose in distilled water; 10,500 cc. of 5 per cent dextrose in normal saline; 10,000 cc. of normal saline, 11 units of plasma and 7,000 cc. of whole blood parenterally. He was also given sulfadiazine, crude liver extract, amigen (terminally) with other supportive and symptomatic therapy.

CLINICAL DIAGNOSIS

DR. MUSICK: Certainly the major factor in a differential diagnosis of this case is the profound diarrhea from which the patient suffered. Its nature is such that one must consider first a primary disease of the lower intestinal tract. Three possibilities immediately come to mind: (1) amoebic colitis, (2) idiopathic ulcerative colitis and (3) bacillary dysentery. A fourth condition might be added to these three, a mixed type of infection — bacillary dysentery *plus* amoebic colitis.

Early in the patient's hospital course, several other possibilities were also considered. *Typhoid fever* was eliminated on the basis of negative blood cultures and agglutination tests. *Regional enteritis* and *segmental ulcerative colitis* were discarded because of later observations that the entire colon was diffusely affected. *Granuloma venereum* and *carcinoma of the lower sigmoid colon* were also considered. I shall limit my discussion however to those three diseases first mentioned.

The complaint of marked tenesmus early in the course of this disease is very significant and is one of the symptoms which directed our attention to some lesion in the rectosigmoid or rectum. The patient would often express an urgent desire to defecate even though he had just left the bedpan. He would have 15 or 20 stools per 24 hours and there were bloody and mucopurulent. We immediately did a sigmoidoscopic examination.

Early in a case of *bacillary dysentery* one sees through the sigmoidoscope, mild edema and slight redness of the mucosa. This is followed shortly by petechial hemorrhages. At this stage one cannot differentiate between a primary colonic infection and some other condition causing a purpuric reaction. By the sixth to seventh day there will be more edema and a rounding out of the valves. Still later, small punctate ulcerations occur in the sigmoid area. As this progresses, many of the ulcers become confluent and their base is covered by a gray membrane. Between the ulcers the mucosa is reddened, granulomatous and bleeds readily. Some sigmoidoscopists claim that they can differentiate between *idiopathic ulcerative colitis* and bacillary dysentery. I have not been able to do this by direct inspection alone although I have made several thousand such examinations. In my experience nonspecific ulcerative colitis usually produces a picture which is identical with bacillary dysentery. The situation is quite different in *amoebic colitis*. Here one sees shallow, discrete ulcerations in the sigmoid colon, but these do not usually become confluent. Even more important in differential diagnosis is the fact that the mucosa between the ulcers is not hyperemic or granulomatous, nor does it bleed readily. Where one encounters bacillary dysentery superimposed upon an amoebic infection, again one observes the same picture as was described for ulcerative colitis. If you find changes of this type (involvement of the mucosa between the ulcers) and demonstrate Endamoeba histolytica, it usually means a mixed type of colitis.

The character of the stools vary also in these three diseases. In *bacillary dysentery* there is usually much blood and a considerable amount of pus, in fact approximately 90 per cent of the cells are usually leukocytes. There will be considerable undigested food also, perhaps because of the rapid transit of food from mouth to anus. In *ulcerative colitis* there may also be much blood and pus, but in addition, many cells are present which come from the wall of the intestine. Great sloughs of mucous membrane may be seen. In *amoebic colitis* there is usually little pus except in the mixed type of infection. In certain fulminating forms there may be much blood. E. histolytica can be demonstrated in 50 to 60 per cent of cases of amoebic colitis on the first stool examination. Statistically, if four stool examinations are carefully done, the organisms can be demonstrated in 80-90 per cent of cases. It is important to remember that some types of amoebic colitis are characterized by constipation rather than diarrhea. Particularly in the constipated form of the disease the flotation method of Faust is useful in demonstrating the organisms. The differentiation of E. histolytica from Endamoeba coli is of prime importance. I shall not go into details of differentiation except to stress the importance of immediate examination of fresh stools or aspiration specimen using D'Antoni's iodine solution.

The x-ray is of very little value in differentiating between amoebic or bacillary dysentery and idiopathic ulcerative colitis. Early the reaction of the colon is rather nonspecific and characterized by spasm. Later there may be narrowing and shortening of the colon with loss of normal mucosal pattern, but this also may occur in all three of these conditions.

It was my opinion that this patient had, initially, amoebic colitis and that this was followed by nonspecific ulcerative colitis from which he died.

CLINICAL DISCUSSION

QUESTION: What is your explanation for the gastric bleeding?

DR. MUSICK: This was probably the result of erosion of the gastric mucosa, on a toxic basis.

QUESTION: Does examination of material directly from the colonic ulcers more often yield recognizable E. histolytica?

DR. MUSICK: Yes — if one uses a glass aspirator with a rubber bulb and collects material from the base of an ulcer, these organisms are easier to demonstrate.

DR. HOPPS: There are three points of immediate interest. None of you inquired as to the immediate cause of death in this individual. It seems clear that some intercurrent lesion or disease developed. The patient was quite emaciated, his plasma proteins were decreased to 5.1 per cent and he had generalized nutritional edema on the basis of this hypoproteinemia. Most of his tissues were atrophic. Dr. Musick, would you care to comment on these aspects of the case?

DR. MUSICK: Malnutrition is certainly one of the bugbears of this disease and we did our best to combat this change by giving many infusions of whole blood and plasma, feeding amino acids, giving multiple injections of crude liver, etc. All of this is in the nature of supportive therapy however and does not seem to be the major factor in pro-

ducing a remission of the fulminating colitis.

QUESTION: In retrospect do you consider that ileostomy was the treatment of choice?

DR. MUSICK: These patients are certainly bad surgical risks. Ordinarily the mortality with medical treatment is 3 to 5 per cent as contrasted with 15 to 20 per cent from surgical treatment. In this case, ileostomy was employed as a last resort with the hope that diversion of the fecal stream from the diseased colon might bring about a remission.

QUESTION: Shouldn't these cases be operated upon earlier?

DR. MUSICK: Recall the mortality statistics I just mentioned. In the fulminating cases, by the time the nature of the disease is recognized and an adequate effort at conservative treatment is made, even though this takes but a week or so — the patient is already a poor surgical risk.

ANATOMIC DIAGNOSIS

DR. HOPPS: This has been a most stimulating discussion and I shall present the necropsy findings briefly in order that we may have an opportunity to continue the discussion. Upon opening the abdomen a small amount of greenish-yellow, foul smelling, blood-tinged, purulent fluid was encountered. All viscera were matted together by easily torn fibrino-purulent exudate. Fifty to sixty cc. of pus lay between the dome of the liver and the right leaf of the diaphragm. Both pleural cavities contained considerable thin sanguino-purulent fluid (200 and 500 ccs.) so that the patient had also bilateral early empyema. There was no break in continuity of the diaphragm. The *immediate cause of death* was massive pulmonary embolism. Thrombotic emboli filled both pulmonic arteries and their major branches (see Fig. 1). Phlebothrombosis involved the right femoral and iliac vein and this was the site from which the thrombotic embolus was derived. In addition there had occurred an infarct of the right lung. This later finding correlates well with the "pain in the chest" of which the patient complained four days before death. The terminal events in this case are quite characteristic of death from pulmonary embolism.



FIGURE 1

Observe the thrombotic emboli which occlude both major pulmonic arteries. The area of infarction is not apparent in this specimen.

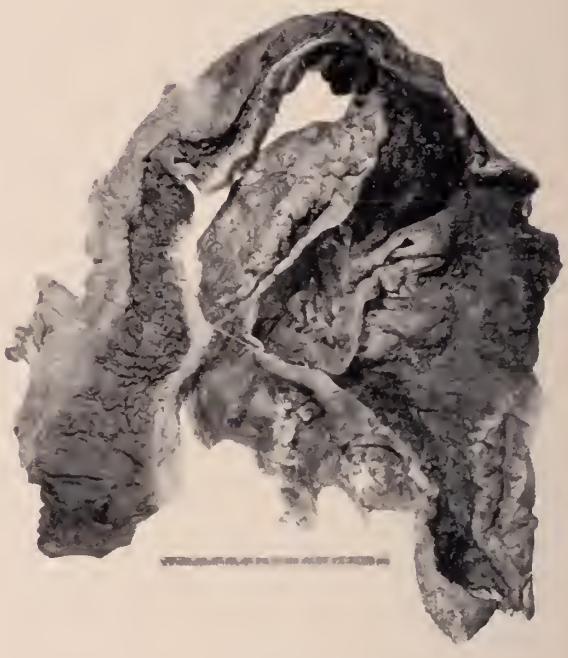


FIGURE 2

Note especially the marked dilatation of the transverse colon and the extensive area of ulceration.

Other major changes were pretty much limited to the liver and the colon. The liver was markedly enlarged, approximately two and one-half times normal (3,700 grams), and was pinkish-yellow and more friable than usual. The basis for this alteration was a very marked fatty change of a type usually associated with malnutrition — a change which very frequently represents the first stage of portal cirrhosis. The colon was spectacular. Throughout its entire length there was a diffuse necrotizing ulcerative process.

There was no normal mucosa present and approximately 90 per cent of the area was completely denude of mucosas. Many of the small ulcers had become confluent and one such area measured 10 x 20 cm. The transverse colon was markedly dilated so that it occupied approximately half of the abdominal cavity. The descending colon, in contrast, was spastic to the extent that its lumen was almost occluded. The actual point of perforation was no longer apaprent. It probably occurred in the dilated, thinned transverse colon (see Fig. 2). Careful microscopic examination of many blocks from the colon did not disclose any evidence of E. histolytica.

DISCUSSION

QUESTION: Did necropsy findings explain the proteinuria?

DR. HOPPS: This man had a diffuse purulent peritonitis and this produced a toxic nephrosis which in turn was responsible for proteinuria.

QUESTION: Dr. Musick, do you still think that this patient had amoebic colitis initially?

DR. MUSICK: Yes, — there are recorded instances of patients with proved amoebic dysentery in which there occurred a gradual transition to idiopathic ulcerative colitis, and I believe that this patient is an example of this type.

QUESTION: Dr. McMullen, in a condition such as Dr. Musick describes, might the amoebic infection be eliminated in the course of the subsequent infection?

DR. MCMULLEN: I think it is quite possible. The intestinal environment in ulcerative colitis would be quite unfavorable to the growth of E. histolytica.

QUESTION: Was the fatty liver the result of toxemia?

DR. HOPPS: This was certainly a factor, but I believe that more important was malnutrition. In experimental animals, as well as in human beings on a starvation diet, during the course of the starvation, lipid is mobilized from fat depots and, for a time, accumulates in large amounts in the liver. This individual had a reduced dietary intake, deficient absorption because of his colitis and, in addition, a marked increase in protein requirement.

MEET OUR CONTRIBUTORS

Dr. W. Branham, M.D., with offices in the Medical Arts Building in Oklahoma City, is a University of Oklahoma Medical School alumnus, having been graduated in 1925. He is a diplomate of the American Board of Urology and a fellow of the A. M. A.

G. R. Russell, M.D., is associated with the Springer Clinic in Tulsa, where he limits his practice to pediatrics. He is a fellow of the A. M. A. and a diplomate of the American Board of Pediatrics. He was graduated from the Western Reserve University School of Medicine, Cleveland, Ohio, in 1925.

Felix R. Park, M.D., F.A.C.P., has offices in the Medical Arts Building in Tulsa, having come to Oklahoma in 1945 from Peunsylvania. He was graduated from the University of Michigan Medical School in 1930 and is a diplomate of the American Board of Internal Medicine.

Andre B. Carney, M.D., F.I.C.S., F.A.C.S., is connected with the Tulsa Clinic. He was graduated from the New York Uuiversity College of Medicine in 1922 and is a fellow of the A. M. A.

Vern H. Musick, M.D., Assistant Professor of Medicine, and *Howard C. Hopps, M.D.*, Professor and Chairman of the Department of Pathology, conducted the Clinical Pathologic Confereuce at the University of Oklahoma School of Medicine. The conference is held weekly at the school and is attended by junior and senior students, hospital interus, resideuts, clinicians, and faculty. The report is prepared for publication in the Jourual each month by Dr. Hopps and the Department of Pathology.

President's Page

The entire State was shocked a few days ago when the radio and newspapers announced the fatal accident which took the life of one of the most active physicians of our State, Dr. James D. Osborn of Frederick.

Dr. John D. Salter of Chickasha, who spoke at his funeral, aptly said what was in the minds of us all when he said:

"His death, just when his efficient professional practice was making itself effective and influential, brings us face to face with one of the deep and age-old mysteries of life. Though we try to disbelieve it, he has passed on; he has laid down his shield unstained and his sword, not as one grown old and weary of the fight, but as the brave and eager, in the full flush of victory with triumph in his eyes. Life for Dr. J. D. Osborn was adventure, thrilling, challenging, daring. He saw through the steady and clear eyes of useful manhood both the supreme glory and awfulness of living. He greeted each new day with zest and gladness; its dawn was filled with promise, its hours with deeds to be done. Each new responsibility was greeted with joy; it brought to him new opportunity. Aware of the uncertainty of life, he threw himself into the task of living with high joy. No day was cold and grey for him, but every day, even the sunless, rainy day, was bright with challenge and duty. Intellectually, Dr. Osborn was alert, morally clean, socially courteous, kindly disposed, a gentleman at all times."

L. C. Kuykendall

President.


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Special Article

JAMES D. OSBORN, M.D.

On Friday afternoon, February 7, while on the way to Chicago, Dr. James D. Osborn was thrown through the window of an overturned pullman car and instantly killed. In line of public duty he was on the way to Chicago to attend a meeting of the National Federation of State Medical Examining Boards. He was elected a member of this National Federation in 1943 and was chosen as president-elect at the last regular meeting. When his untimely death occurred he was on his way to the scheduled meeting of this organization in connection with the Congress of Medical Education and Licensure, where he would have been installed as president of the former. Dr. Osborn was a member of the National Board of Medical Examiners. He had been secretary of the Oklahoma State Board of Medical Examiners for a period of twelve years, also secretary of the Board of Examiners in the Basic Sciences.

Dr. Osborn was the first to fill the position of Speaker of the House of Delegates of the Oklahoma State Medical Association. He served in this capacity until he was elected president of the State Association in 1941. He served on the Draft Appeal Board in World War I and acted as Chairman of the Minute Men Speaking Board. In the post-war period he was Chairman of Tillman County Red Cross. He helped to organize this agency and devoted much of his time toward the administration of its relief work. He was surgeon for the Frisco Railroad from the year 1902, and was appointed surgeon and ophthalmologist for the Missouri, Kansas, and Texas Railroad when it built into Frederick under the name of Wichita Falls and Northwestern.

During World War II he was a member of the Medical Advisory Board and chief examiner for Tillman County under Selective Service.

Dr. Osborn was born in Cleburne, Texas, December 22, 1879. His father and his grandfather were doctors. His family traveled from Alabama to Texas. His scholastic record carries him through grade and high schools at Cleburne, Military Academy at Forney, Texas, Medical School at the University of Texas, and finally at Tulane University where he was graduated in 1901.

After graduation at Tulane he practiced medicine in Lawton, Oklahoma, for a short time. During his stay at Lawton he was holding down a claim a short distance away. Soon he traveled to Oklahoma City where he practiced from 1901 to 1905, before he located for the continued practice of his profession in Frederick, Oklahoma.

Time and space will not permit a complete record of the story of this great man's life. What he meant to the people of his home town, the profession of his State, and organized medicine in the Nation cannot be amply treated in this brief sketch. His services were far reaching and incalculable. At the offices of the State Medical Association and in its councils and caucuses Dr. Osborn's habitual courage, wise counsel, keen judgment, peculiar charm, and rare wit will be sadly missed.

It may be said that when Dr. Osborn met his lamentable death he was running traditionally true to the high principles of his profession. Having left his practice to pursue the common weal he was sacrificing material gain for public good.

Humbly we mourn his death and press on in the high calling he so amply exemplified.

APRIL BIRTHDAY MONTH OF BLUE CROSS AND OPS

The two nonprofit health plans sponsored by the hospitals and physicians of Oklahoma will have birthdays next month. Blue Cross will be seven years old, and Oklahoma Physicians Service will be two. These are significant anniversaries for both organizations. Blue Cross, with 180,000 members, is leaving the "small plan" category and enters the sphere of large operations. Its success is assured. Its operations have been placed on a businesslike, efficient basis. Its days of experimental procedures are over. Blue Cross in Oklahoma has spent its green years, and now, possessed of a sanguine maturity, is ready to do the job for which it was created — making good hospital care readily accessible to everyone in the State. Oklahoma Physicians Service can stand on its second milestone and view two well-spent years of organizational activity that has placed the plan on a sound financial basis and set the stage for accelerated enrollment which is now taking place.

The building of these two plans has been long and tedious, but it has been accomplished with simple tools — honesty, simplicity, and forbearance. The methods used are exemplified by these statements: "A public service, without public compulsion." "Private enterprise, without private gain." During this seven years of growth, the most effective representatives of the Blue Cross idea have been the subscribers themselves. To the subscriber, the Blue Cross idea becomes a generous reality when the need for costly hospital care arises.

In 1940, many States had already established Blue Cross Plans, but in Oklahoma the idea was still resting uneasily in the heads of a few farsighted physicians who could readily see the need for creating such a plan, but were finding it difficult to acquire the necessary support and information that was needed to begin operations. They were the nucleus of a committee appointed by the Oklahoma State Medical Association to bring Blue Cross to Oklahoma. The Blue Cross Plan in St. Louis was contacted in an effort to get information on how to go about creating a Plan. After many committee meetings and



Pictured above are members of the Board of Trustees of the Oklahoma Blue Cross Plan as they study the annual report for the year 1946 at the regular midwinter meeting held January 20 in Oklahoma City. Left to right seated are Mont F. Highley, Jr., Secretary, Oklahoma City; Dr. A. S. Risser, President, Blackwell; T. Austin Gavin, Second Vice-President, Tulsa. Standing are Elmer W. Pollock, Tulsa; Dr. H. B. Stewart, Tulsa; Bryce Twitty, Tulsa; Dr. H. C. Weber, Bartlesville; E. U. Benson, Cushing; Dr. Chester L. McHenry, Oklahoma City.



N. D. Helland, Executive Director

meetings with local citizens, the Assistant Director of the St. Louis Plan, Mr. W. R. McBee, was employed as Director of the Plan in Oklahoma, which was incorporated on April 1, 1940. It was the intention of the Medical Association to have an enabling act passed, permitting the hospitals of Oklahoma to create such an organization. After consulting with legal counsel and the Attorney General of Oklahoma, it was decided that the Mutual Casualty Act of this State would permit the hospitals to do everything they wanted to do without waiting for the time required to have an enabling act passed, particularly in view of the fact that the legislature was not in session at the time. This is the reason that in Oklahoma Blue Cross operates under the regular State Insurance Department, whereas in most States a special enabling act was passed, permitting the local hospitals to carry on this function, the enabling act taking the Blue Cross Plan out of the category of insurance.

During the long months of preparatory activity, the personalities of a few doctors were the driving force that kept the idea alive and moving until the actual organization took place and became incorporated. The corporate structure of Blue Cross is composed of twenty-one board members. In order to have interested portions of society represented, the by-laws provide that seven of the trustees must be hospital administrators to represent hospital interests; seven trustees are doctors to represent medical interests; and seven are local business men to represent employed groups.

Nine per cent of the people in Oklahoma are now members of Blue Cross. Oklahoma's population is predominantly rural and problems of reaching a cross section necessary to be sure that the demand for hospital service does not exceed the general overall average have been great. The principle of group enrollment extends also to farm groups and these groups are difficult to organize for various reasons. The farm groups from which Blue Cross accepts members are the Farm Bureau, the State Grange, the Farmers Home Administration, and Home Demonstration Clubs. It is estimated that the combined membership of these groups is approximately 220,000 people. Under the present farm enrollment system, this figure represents the potential for Blue Cross membership, which excludes more than a half million farm people who do not belong to any of these groups. Farmers have been very receptive to Blue Cross and farm enrollments have made substantial gains during the past several months. It is hoped that a formula for enrolling the entire populations of counties can be worked out to solve this problem in rural areas of the state.

In August 1941, McBee resigned as Director of Blue Cross to become director of the Texas Plan. A committee of three members of the Board of Trustees was named to employ a new director. On December 1, 1941, N. D. Helland, then associated with the Blue Cross Plan in Wisconsin, was made Executive Director of the Oklahoma Plan, which position he still holds.

Coincident with Helland's appointment, the large commercial insurance companies became very active in the prepaid health field, and in order to compete favorably with Blue Cross, included surgical benefits in their plans. As a result of this activity, it became quite necessary for Blue Cross to have a prepaid surgical plan in order to satisfy particularly the big employers, so by working with local doctors interested in the movement, a committee of the State Medical Association was appointed for the purpose of studying and drafting a prepaid plan that would be acceptable to the Medical Association. Dozens of committee meetings were held, corporate papers were drafted, changed, and re-drafted, and finally in 1945 a surgical plan was offered to the people of Oklahoma, officially sponsored by the State Medical Association. This was organized again under the Mutual Casualty Act of the State insurance laws. Efforts were made at first to organize the plan on a service contract basis exactly like the Blue Cross Plan, whereby the doctors would sign a contract agreeing to render surgical and obstetrical care to the members for a stipulated fee, this feature to apply to



Avant, Oklahoma, is typical of the small rural communities that have been enrolled in Blue Cross on a community basis. Mrs. J. B. Smith is pictured above explaining the plan to members of the community meeting. Forty applications covering 112 participants were the results of the organizational work done by Mrs. Smith and committee members. Dues will be paid at the local telephone exchange.



The Shell Oil Corp., with Mid-Continent Hqs. in Tulsa, has enrolled employees in Okla., Kans., Tex., Ill., and Colo. in Blue Cross and OPS on a payroll basis. The management adopted these nonprofit plans after careful studies and comparisons with other plans. Above, reviewing the benefits and costs of the program, are J. A. LaBarge, Chief Clerk; Harry Eells, Asst. Personnel Mgr.; C. L. Stinnett, Personnel and Industrial Relations Mgr.; Herb Felkel, Blue Cross Enrollment Mgr.; and John Reed, Sr. Clerk.

persons with certain incomes in the plan and to be on an indemnity basis for persons with incomes greater than the amount specified. The service plan was not acceptable to the House of Delegates of the State Medical Association, so again the structure was changed and an indemnity plan was proposed. This was passed and became a reality on April 1, 1945. The Board of Trustees, composed of nine doctors and six business men, was set up as the policy-making body. This new corporation entered into a contract with Blue Cross whereby Blue Cross would handle the promotion of enrollment and the records of the new corporation with the same Executive Director functioning for both organizations, all through the organization of Oklahoma Physicians Service. Again a few doctors were responsible for keeping the idea moving along to a final successful conclusion.

Oklahoma Physicians Service was incorporated in April 1945, but enrollment was not begun until June. Enrollment started very cautiously and only large payroll groups were taken as members. This caution was necessary to insure the financial success of the venture, and it was continued for a year. Now Physicians Service, with more than 20,000 members, is available to all employed groups that are enrolled in Blue Cross.

Thirty-eight county medical societies have endorsed the Physicians Service Plan. This endorsement and sponsorship is necessary before the plan can be offered to the people of a county. By endorsement is meant that (1) the doctors in the county will speak well of the plan and assist the representatives in presenting it, (2) that they will not abuse the plan by unnecessary surgery, and (3) that they will not abuse the plan by charging higher fees that would normally be charged if the plan were not present.

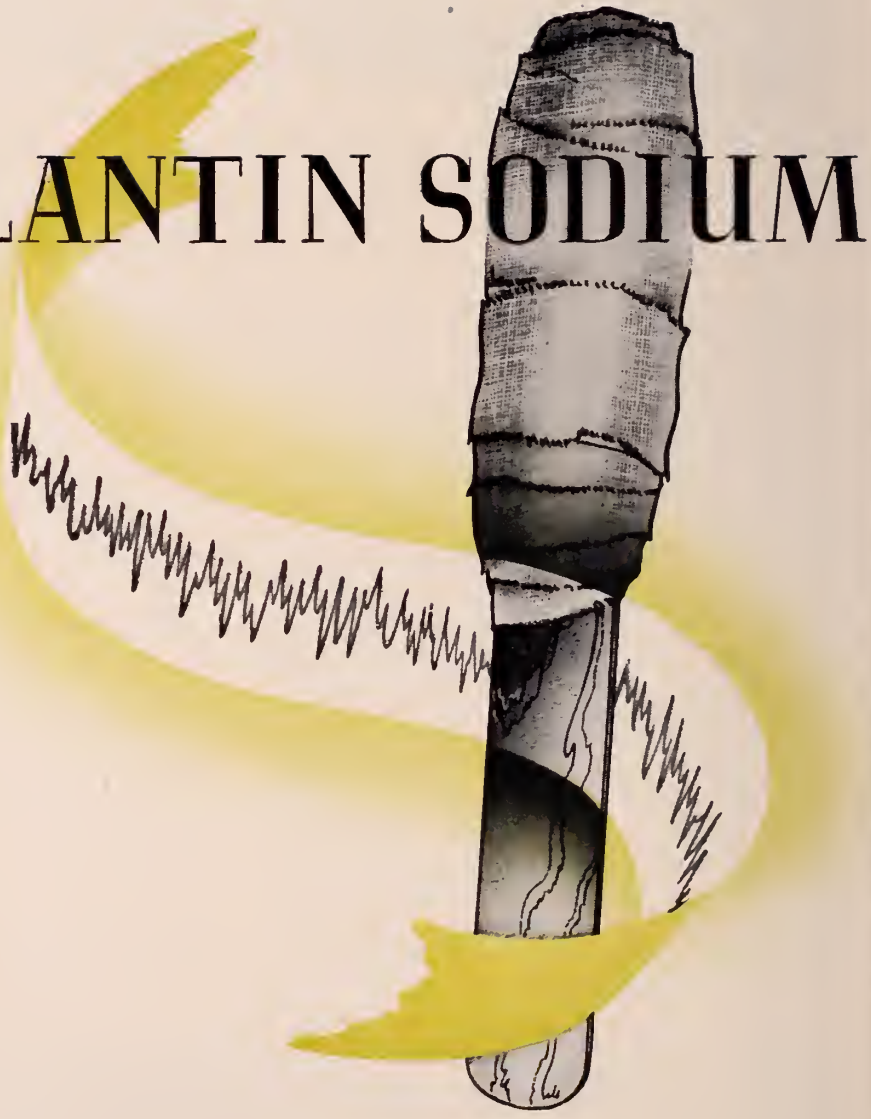
It is hoped that the time is not too far distant when Oklahoma Physicians Service can be offered to associated groups, communities, and farm organizations.



Accounting Department, Tulsa Blue Cross and OPS Office

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ASSOCIATION ACTIVITIES

MEDICAL SCHOOL OFFERING EDUCATIONAL PROGRAM IN BASIC SCIENCES

Physicians throughout the state, residents, and especially physicians who are contemplatiug taking Special Board examinations, will be interested to know that the University of Oklahoma School of Medicine has inaugurated a series of conferences consisting of twelve 1½-hour sessions covering Anatomy and Physiology. The dates of meeting and subject matter schedule are as follows:

Feb. 4. Recent Advances in the Anatomy of Lung and Pleura

Feb. 11. The Anatomy of Cardiac Malformations and the Coronary Circulation

Feb. 18. Applied Anatomy of the Peritoneum and G. I. Tract

Feb. 25. Peripheral Nerve Plexuses

March 4. Arterial Anatomy and Collateral Circulation

March 11. Venous Pathways in the Spread of Tumors and Infections

March 18. The Anatomy of Lymphatic Spread of Tumors and Iufections

March 25. Applied Anatomy of the Autonomic Nervous System

April 1. Applied Anatomy of Joints

April 8. The Anatomy of Hernia (mainly inguinal and femoral)

April 15. Applied Anatomy of the Central Nervous System

April 22. Body Type and Constitution

Feb. 6, 13. Blood and Its Constituents

Feb. 20, 27. Heart and Circulation

March 6, 13. Respiration

April 3. Metabolism

April 10. Nervous System

April 17. Reproduction

April 24. Endocrines

The above is the first of four programs to present recent developments in the basic sciences. Details of subsequent programs will be supplied later. Meetings will be held in room 215, School of Medicine Building, 801 N. E. 13th Street, Oklahoma City, Okla. There is no fee.

Physicians interested in attending should communicate with the Education Committee of the University Medical School.

OKLAHOMA COUNTY HEALTH ASSOCIATION SPONSORS NEW MOBILE CLINIC

The first, and at this time, the only tuberculosis clinic on wheels iu Oklahoma was dedicated at public ceremonies in Oklahoma City, January 25, 1947. The Mobile Unit is designed to bring a free tuberculosis detection service to the people of Oklahoma County through the sponsorship of the Oklahoma County Health Association.

Christmas Seals Buy Clinic

Oklahoma County Health Association's mobile x-ray clinic was paid for entirely out of funds raised by the 1945 sale of "TB Christmas Seals" bought by the people of Oklahoma County. Operating costs will come from the funds obtained through the 1946 sale of seals. The clinic cost $25,518.55.

Free X-Ray Service

Chest x-ray service, free of cost, to the estimated 260,000 residents of Oklahoma County above 14 years of age is now being conducted and planned. The Mobile Clinic will move about on a prearranged schedule and to conserve time and effort will first serve groups of individuals. Stipulation of the age minimum of 14 years is in line with present conclusive data regarding immunity to TB by younger children, excepting those under four years of age. Those in the younger age bracket have available a more satisfactory x-ray service for the immature chest at the Variety Club Health Center in Oklahoma City.

Confidential Reports; Follow-Up

Subsequent to the free x-ray all persons will be mailed a sealed report of the findings whether positive or negative. Careful and sincere follow-ups will also be made where a positive report has been given.

ANNUAL AUDIT REPORT

January 23, 1947

L. C. Kuyrkendall, M.D., President
Oklahoma State Medical Association
210 Plaza Court
Oklahoma City, Oklahoma
Dear Sir:

We have completed the audit of the financial records of:

THE OKLAHOMA STATE MEDICAL ASSOCIATION
OKLAHOMA CITY, OKLAHOMA

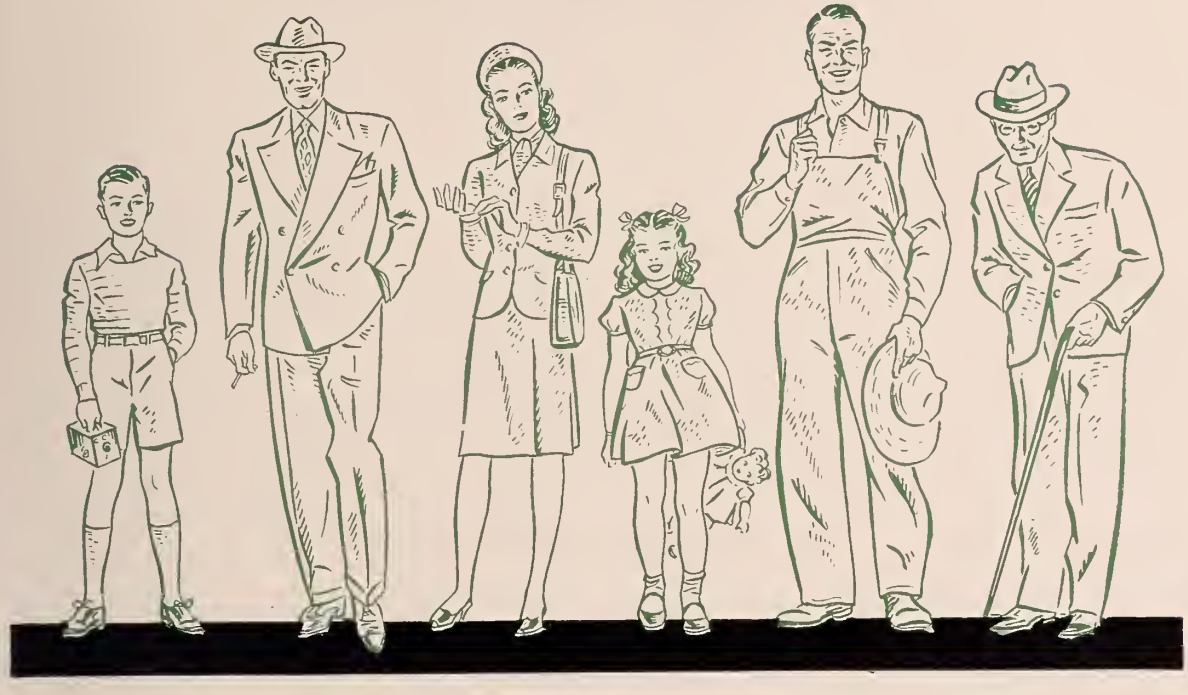
for the period from January 1, 1946, to December 31, 1946, and submit herewith the following Exhibits:

EXHIBIT "1"—Balance Sheet
EXHIBIT "2"—Statement of Cash Receipts and Disbursements
EXHIBIT "3"—Operating Statement
EXHIBIT "4"—Bank Reconciliation

We wish to thank you for this audit, and if we can be of further service, please feel free to call upon us.

Respectfully Submitted,
H. E. COLE COMPANY
By: H. J. Cole

(Continued on Page 106)



indications for "smoothage"

"smoothage"—the gentle, non-irritating action of Metamucil—is indicated in any type of constipation or other gastrointestinal dysfunction requiring a mild, soothing but effective stimulant to bowel evacuation.

metamucil provides a soft, bland, plastic bulk which exerts a stimulating effect on the bowel reflexes and facilitates elimination of the fecal content in a completely normal and natural manner.

metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%), as a dispersing agent.

ACCEPTED AMERICAN MEDICAL ASSN.

SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

Metamucil is the registered trademark of
G. D. Searle & Co., Chicago 80, Illinois

ANNUAL AUDIT REPORT (CONTINUED)

OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma

EXHIBIT "1"

BALANCE SHEET

December 31, 1946

	Total	Membership Fund	Journal Fund	Annual Meeting Publicity Fund	Medical Defense Fund	State Fair Fund
ASSETS						
Liberty National Bank	$21,307.67	$ 3,689.44	$ 1,377.05	$15,759.97	$ 419.34	$ 61.87
Petty Cash	20.00	20.00				
U. S. Defense Bonds	2,220.00	2,220.00				
U. S. Savings Bonds	4,000.00	4,000.00				
U. S. Treasury Bonds	6,178.88	6 178.88				
Total Assets	$33,726.55	$16,108.32	$ 1,377.05	$15,759.97	$ 419.34	$ 61.87
LIABILITIES & NET WORTH				*Annual Meeting*		
Operating Reserve 1-1-46	$19,657.88	$16,328.52	$ 2,411.55	$ 236.60	$ 619.34	$ 61.87
				Publicity		
Net Revenue, 1946	14,068.67	2,068.48	—3,559.78	15,759.97	—200.00	
Transfer of Funds 1946		—4,000.00	4,000.00			
Transfer of Funds 1946		1,474.72	—1,474.72			
				A.N. Meeting		
Transfer of Funds 1946		236.60		—236.60		
Net Operating Reserve 12-31-46	$33,726.55	$16,108.32	$ 1,377.05	$15,759.97	$ 419.34	$ 61.87
Total Liabilities & Net Worth	$33,726.55	$16,108.32	$ 1,377.05	$15,759.97	$ 419.34	$ 61.87

Note: Column No. 4. Annual Meeting Fund Transferred to Membership Fund Publicity Fund Established.

OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma

EXHIBIT "2"

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS

January 1, 1946 to December 31, 1946

	Total	Membership Fund	Journal Fund	Annual Meeting Publicity Fund (An.)	Medical Defense Fund	State Fair Fund
Cash Balance, January 1, 1946	$ 7,248.37	$ 3,919.01	$ 2,411.55	$ 236.60	$ 619.34	$ 61.87
Petty Cash	11.13	11.13				
RECEIPTS						
Membership Dues	16,782.00	16,782.00				
Special Assessments	20,875.00			20,875.00		
Government Bond Interest	180.00	180.00				
Annual Meeting Income	4,045.39	4,045.39				
Miscellaneous Income	285.50	285.50				
Transfer From Annual Meeting	236.60	236.60				
Transfer From Journal	1,474.72	1,474.72				
Transfer From Membership	4,000.00		4,000.00			
Journal Advertising and Subscriptions	13,646.68		13,646.68			
Total Cash to be Accounted for	$68,785.39	$26,934.35	$20,058.23	$21,111.60	$ 619.34	$ 61.87
DISBURSEMENTS				(Pub.)		
Expenses, 1946	$41,745.90	$19,224.41	$17,206.46	$ 5,115.03	$ 200.00	$
Accrued W.H. Taxes 1-1-46	.50	.50				
Transfer to Membership	236.60			236.60		
Transfer to Membership	1,474.72		1,474.72			
Transfer to Journal	4,000.00	4,000.00				
Total Disbursements	$47,457.72	$23,224.91	$18,681.18	$ 5,351.63	$ 200.00	$
Balance December 31, 1946	$21,327.67	$ 3,709.44	$ 1,377.05	$15,759.97	$ 419.34	$ 61.87
Bank Balance December 31, 1946	$21,307.67	$ 3,689.44	$ 1,377.05	$15,759.97	$ 419.34	$ 61.87
Petty Cash	20.00	20.00				
	$21,327.67	$ 3,709.44	$ 1,377.05	$15,759.97	$ 419.34	$ 61.87

ANNUAL AUDIT REPORT (CONTINUED)

OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma
EXHIBIT "3"
OPERATING STATEMENT
January 1, 1946 to December 31, 1946

	Total	*Membership Fund*	*Journal Fund*	*Publicity Fund*	*Medical Defense Fund*	*State Fair Fund*
REVENUES						
Membership Dues, 1946	$16,782.00	$16,782.00	$	$	$	$
Journal Advertising and Subscriptions	13,646.68		13,646.68			
Government Bond Interest	180.00	180.00				
Annual Meeting Income	4,045.39	4,045.39				
Special Assessments	20,875.00			20,875.00		
Miscellaneous Income	285.50	285.50				
	$55,814.57	$21,292.89	$13,646.68	$20,875.00	$	$
EXPENSES						
Salaries	$12,324.55	$ 4,926.45	$ 7,398.10	$	$	$
Telephone and Telegraph	924.69	924.69				
Postage	1,066.82	936.82	15.00	115.00		
Rent	1,150.00	800.00	350.00			
Stationery and Printing	603.57	603.57				
Printing and Mailing	8,716.63		8,716.63			
Engraving	415.16		415.16			
Office Supplies	764.01	764.01				
Traveling Expense	2,065.11	2,065.11				
Auditing and Legal	200.00	50.00	150.00			
A.M.A. Delegates Travel Expense	576.62	576.62				
Annual Secretaries Conference	143.88	143.88				
Annual Meeting	5,476.59	5,476.59				
Office Furniture and Fixtures	368.96	368.96				
Sundry Account	905.01	825.16	52.85	27.00		
Health Exhibit	500.00	500.00				
Surety Bond	206.55	206.55				
Chamber of Commerce	25.00	25.00				
Refund of Dues	31.00	31.00				
Advertising	4,973.03			4,973.03		
Press Clipping Service	108.72		108.72			
Medical Defense	200.00				200.00	
Total Expenses	$41,745.90	$19,224.41	$17,206.46	$ 5,115.03	$ 200.00	$
Net Revenue 1946	$14,068.67	$ 2,068.48	—$3,559.78	$15,759.97	—$ 200.00	$

OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma
EXHIBIT "4"
BANK RECONCILIATION
December 31, 1946
LIBERTY NATIONAL BANK

Membership Fund		
Balance as per Bank Statement, December 31, 1946		$ 4,238.99
Outstanding Checks		
Voucher No. 2155 Postmaster	$ 55.00	
Voucher No. 2177 Ruby Williams	4.50	
Voucher No. 2182 Dick Graham	197.35	
Voucher No. 2192 Collector of Internal Revenue	165.60	
Voucher No. 2193 Dick Graham	97.10	
Voucher No. 2194 Virginia Owens	30.00	549.55
Balance as per Books, December 31, 1946		$ 3,689.44
Journal Fund		
Balance as per Bank Statement, December 31, 1946		$ 1,814.60
Outstanding Checks		
Voucher No. 1986 Hygeia (June, 1946)	$ 6.00	
Voucher No. 2186 Dick Graham	197.35	
Voucher No. 2188 L. J. Moorman	90.50	
Voucher No. 2191 Collector of Internal Revenue	143.70	437.55
Balance as per Books, December 31, 1946		$ 1,377.05
Publicity Fund		
Balance as per Bank Statement, December 31, 1946		$15,759.97
Balance as per Books, December 31, 1946		$15,759.97
Medical Defense Fund		
Balance as per Bank Statement, December 31, 1946		$ 419.34
Balance as per Books, December 31, 1946		$ 419.34
State Fair Fund		
Balance as per Bank Statement, December 31, 1946		$ 61.87
Balance as per Books, December 31, 1946		$ 61.87

HAVE YOU HEARD

Dr. L. Stanley Sell, Oklahoma City, was recently inducted into the fellowship of the American College of Surgeons at formal ceremonies in Clevelaud, Ohio. Dr. Sell was chosen for the honor in 1945 while serving with the Armed Forces in Germany.

Three Tulsa physicians were recipients of 1946 Annual Civic Awards given by the local Chamber of Commerce in recognition of outstanding civic services, at the Chamber's Annual Banquet on Jauuary 16. *Dr. Homer A. Ruprecht*, Springer Clinic iuternist, was honored for his work as director of au extensive study of hospital conditions in Tulsa County and northeastern Oklahoma in 1945 aud 1946. *Dr. Walter F. Sethney*, pediatrician, and *Dr. Ian MacKenzie*, orthopedist, were eommended for their services to victims of the Tulsa infantile paralysis epidemic last summer, serving tirelessly and without compensation as supervisors of the polio ward at Hillcrest Memorial Hospital.

Dr. D. W. Darwin of the Darwin Clinic, Woodward, Oklahoma, is taking a six-weeks' postgraduate eourse in orthopedic surgery and traumatology under Dr. Arthur E. Steindler and associates at the College of Medical Evangelists, Los Angeles, California.

G. F. Mathews, M.D., State Commissioner of Health, recently announced the following appointments: *Dr. Marvin Terrell* of Oklahoma City, appointed County Superintendent of Health of Oklahoma County; *Dr. C. P. Bishop*, of Muskogee, County Superintendent of Health for Muskogee County; and *Dr. J. M. Cameron*, of Ponca City, County Superintendent of Health for Kay County.

Dr. Henry C. Trzaska has opened offices in Hennessey.

Two veterans of World War II, *Dr. Wilson Mahone* and *Dr. Ralph S. Phelan*, have established offices together in the Lemon Building, Hobart, continuing an association that begau when they both graduated from the University of Oklahoma Medical School in 1939. They served their internship together at Jefferson Davis Hospital, Houston, Texas, and entered the service in July, 1941. After 21 months with the Army Ground Forces in China, Dr. Mahone was recently discharged with the rank of lieutenant colonel. Dr. Phelan served overseas 30 months, seeing combat in the Italian campaign, and was discharged from the Army with the rank of captain.

Dr. Claude B. Waters, born in Pawnee, has returned to that eity to establish a practice in medicine and surgery. A graduate of the University of Oklahoma Medical School, Dr. Waters was recently discharged from the Army with the rank of maor after serving with the Fifth Army in Africa and Italy.

Dr. O. G. Bacon,, Frederick, has announced that *Dr. William E. Hubbard* is now associated with the Frederick Clinic Hospital. Recently discharged from the service, Dr. Hubbard was previously associated with several physicians in Oklahoma City.

NEWS

AMERICAN CONGRESS ON OBSTETRICS AND GYNECOLOGY TO MEET IN SEPTEMBER

The Third American Congress ou Obstetrics and Gynecology will be held in the St. Louis Municipal Auditorium, September 8-12, 1947. This meeting is not directed for the specialist only. The aim of the meeting is to assemble all doctors, nurses, hospital administrators, public health workers, and medical educators who are interested in the care of the mother aud child.

In addition to a variety of program presentations and discussions of obstetric-gynecologic problems and methods, the Congress is building a complete Scientific and Educational Exhibit, a Motion Picture Program, and a large Technical Exhibit. One interesting feature of the program will be 18 daily demoustrations of technique in forceps and breech deliveries by doctors from all over the country.

Information concerning registration fees, hotel reservations, and further details about the program can be obtained from the office of the Congress at 24 West Ohio Street, Chicago 10, Illinois.

POTTAWATOMIE COUNTY SOCIETY TO HOLD ANNUAL SPRING CLINIC

The Annual Spring Clinic of the Pottawatomie County Medical Society will be held at Shawnee, Oklahoma, on Saturday, March 22, 1947, with an afternoon and evening session. The meeting will begin at 2:30 P.M. with dinner at seven o'clock. Speakers will be: Dr. Newton D. Smith, proctologist, Mayo Clinic, and Dr. George L. Carlisle, cardiologist, Dallas.

SOUTHWESTERN OFFERS RESIDENCY IN NEUROPSYCHIATRY

The Southwestern Medical Foundation in cooperation with the Veterans Administration is offering a three-year residency in neuropsychiatry. The first two years are divided into eight-month rotation periods between the Dallas area aud the VA hospital at McKinney and Waco, Texas, and the third year is elective, including investigative work. Required time is divided between psychosomatic medicine and mental hygiene work, includiug child guidance, and inpatient psychiatry. For further information write the Secretary of the Dean's Subcommittee for Neuropsychiatry, Southwestern Medical College, 2211 Oak Lawn Avenue, Dallas 4, Texas.

OKLAHOMA CITY PHYSICIANS ACTIVE IN CHAMBER OF COMMERCE

Ninety-eight Oklahoma City physicians are subscribing supporters to the Oklahoma City Chamber of Commerce. This is approximately 38 per cent of Oklahoma City's practicing physicians and represents a percentage equalled by very few cities of its size in the nation. All problems of a medical nature are cleared through the Medical Center Committee of the Oklahoma City Chamber, and important medical projects it has supported include the Oklahoma City Clinical Society, the City-County Hospital Project, the Medical School, the Oklahoma Medical Research Foundation, and the proposed Research Institute.

UPPER RESPIRATORY INFECTIONS:

management with PENICILLIN SCHENLEY

Both systemic and topical penicillin administrations have been found valuable in the treatment of infections of the mouth, nose and sinuses, pharynx, tonsils, larynx, and tracheobronchial system.[1, 2] Since respiratory infections often show a tendency to relapse, it is all-important to adhere to the principle established by clinicians widely experienced in penicillin therapy:

give enough-soon enough-long enough

(1) Menefee, E. E., Jr., and Atwell, R. J.: South. M. J. 39:726 (Sept.) 1946.
(2) Woodward, F. D., and Holt, T.: J.A.M.A. 129-589 (Oct. 27) 1945.



PENICILLIN SCHENLEY. Suggested dosage: Intramuscular, 20,000 to 40,000 units every three hours, continued until the patient has been symptom-free for forty-eight to seventy-two hours. Topical, instillation of 3 to 5 cc. of a solution containing 5,000 to 10,000 units per cc., repeated as frequently as indicated in the judgment of the physician.



PENICILLIN TABLETS SCHENLEY. Suggested dosage: 2 tablets (50,000 units each) every two or three hours day and night until all signs of infection have been absent for at least forty-eight hours. This treatment is suitably employed after initial parenteral therapy, and as an adjunct to topical administration.



Specialized skills devoted to the control of bioculture processes insure the dependability of all penicillin products bearing our label.

EXECUTIVE OFFICES: 350 FIFTH AVE., NEW YORK CITY

SCHENLEY LABORATORIES, INC.

© Schenley Laboratories, Inc.

SCHENLEY LABORATORIES SERVICES: 1. Penicillin Paragraphs for March, dealing with upper respiratory infections, has been mailed to all physicians. 2. A comprehensive penicillin dosage chart will be mailed to physicians on request.

NO. 9 in Schenley Laboratories' continuing summary of penicillin therapy

OBITUARIES

James Thomas Nichols, M.D.
1878-1947

James Thomas Nichols, M.D., of Muskogee, died January 26, 1947, following a cerebral hemorrhage. A pioneer physician of Muskogee, Dr. Nichols had served his community 40 years. He was born September 9, 1878 at Asheville, N. C., and after graduating from the University of Colorado Medical School at Denver in 1903, established his residence at Muskogee in 1907, where he served as city physician for two different terms.

Dr. Nichols served during World War I as captain in the Army. He was a communicant of Grace Episcopal Church. Survivors include Mrs. Nichols; a daughter, Mrs. B. E. Heard, of Dallas, Texas; and a son, John Robert Nichols, of Muskogee.

Swartz Baines, M.D.
1867-1947

Swartz Baines, M.D., of Tahlequah, died January 6, 1947 following a long illness. He was 79 years of age.

A native of Harrison, Ark., Dr. Baines came to Tahlequah in 1916, and only recently retired from active practice. He was graduated from the University of Medicine of Little Rock, Ark., and practiced in Harrison, Ark., before moving to Tahlequah. He was a member of the First Christian Church. Survivors include Mrs. Baines; two sons, Ben and Tom Baines, both of Tulsa; and two daughters, Mrs. Wilson Washington of Tahlequah and Mrs. Max Rust of Muskogee.

Harvey K. Dever, M.D.
1906-1947

Harvey K. Dever, M.D., of El Reno, died February 1 in an El Reno hospital following a short illness caused by a sudden heart attack. Dr. Dever, born at Gifford, Mo., in 1906, moved to El Reno with his parents in 1907. He was graduated from the University of Kansas Medical School in 1930 and interned in Montreal, Canada, afterwards returning to El Reno where he joined his father, the late Dr. H. A. Dever, in the practice of medicine. Survivors include his mother, Mrs. H. A. Dever, and a daughter, Ora Emily Dever, both of El Reno, and a brother, Milford Dever, of Oklahoma City.

George Hunter, M.D.
1881-1947

George Hunter, M.D., former director of the Oklahoma County Health Department, died February 8 at Oklahoma City General Hospital. Death was attributed to tuberculosis.

Born in Ducktown, Tennessee, on March 28, 1881, Dr. Hunter came to Tuttle, Oklahoma, soon after his graduation from the Louisville, Kentucky, Medical College in 1904. Later he moved to Oklahoma City and served as City Health Commissioner. After serving overseas in World War I as a captain in the Army he continued his work with the City Health Department until 1927, when he became director of the Seminole County Health Units. In 1939 he was appointed head of the Oklahoma County Health Unit, serving until he retired December 1, 1945. He was a member of the Methodist Church. Survivors include his wife, a son James Robert Hunter, three sisters, and a brother, all of Oklahoma City.

MEDICAL SCHOOL

CALENDAR — MARCH, 1947

SURGICAL PATHOLOGIC CONFERENCES — Each Tuesday 12:00 Noon to 1:00 P.M.

MEDICAL CONFERENCES — Each Weduesday, 9:00 A.M. to 10:00 A.M.

CLINICAL PATHOLOGIC CONFERENCES — Each Thursday 12:00 Noon to 1:00 P.M.

TUMOR CLINICS — First and Third Tuesdays (March 4 and 18) 8:00 A.M. to 9:00 A.M.

UROLOGIC-PATHOLOGIC CONFERENCE — Second Tuesday (March 11) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING — Second Friday (March 14) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE — Fourth Monday (March 24) 6:45 P.M. to 7:30 P.M.

Dr. Wilma Craft Stafford (Med '33) is in medical practice with her husband, Dr. Wilfred F. Stafford, at Mattoon, Illinois.

The Library has received a facsimile copy of the first medical document printed in the American Colonies, "Brief Rule to Guide the Common People of New England How to Order Themselves and Theirs in the Small Pocks or Measles," by Reverend Thomas Thacker, a gift of Dr. Mumey of Denver, Colorado.

Major Francis Crane (Med '33) of Wilburton, Oklahoma, has been admitted to the Medical Corps of the Regular Army. Major Crane served during World War II in the Pacific Theater where he attained the temporary rank of lieutenant colonel.

Roy Raub (Med '46), who is interning at Jefferson Davis Hospital at Houston, Texas, was a visitor to the school in January.

James A. Dugger (Med '46) reported for active duty with the U. S. Navy Medical Corps February 1, 1947.

Dr. W. Carl Lindstrom (Med '34) is now practicing in Tulsa, Oklahoma.

Dr. Homer F. Marsh, Associate Professor of Bacteriology, was the principle speaker at the meeting of the Osage County Medical Society at Pawhuska, Oklahoma, on January 20, 1947. Dr. Marsh's topic was "The Rh Factor."

Dr. John F. Hackler (Med '33), Professor of Preventive Medicine and Public Health, was the principle speaker at the Second Annual State-wide Party for extuberculous patients, held at the Mayo Hotel in Tulsa, Oklahoma, on February 1, 1947. All persons interested in tuberculosis control were invited to attend. The party is held annually as a "birthday" celebration in honor of Dr. Forrest P. Baker, Superintendent of the State Tuberculosis Sanitarium at Talihina, Oklahoma, and a leader in tuberculosis work in the state for the past 30 years.



to combat

depression characterized by

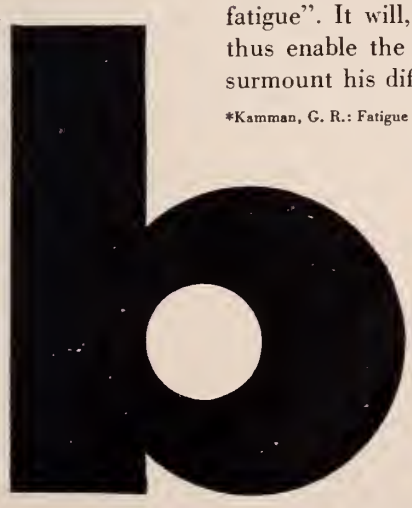
"chronic fatigue"

Depressed patients "... suffering from psychomotor inhibition complain of feeling tired, of not being able to get started on their daily tasks, and of an abnormal inclination to procrastinate. They make up their minds that they are going to do a certain thing but they never seem to get to it. Everything seems too big for them ..."*

In the above quotation, Kamman emphasizes "chronic fatigue" as a dominant symptom in the type of depression most frequently encountered in daily practice.

Benzedrine Sulfate is particularly valuable in the presence of "chronic fatigue". It will, in most cases, help to overcome the depression and thus enable the patient to make a sincere and constructive effort to surmount his difficulties.

*Kamman, G. R.: Fatigue as a Symptom in Depressed Patients, Journal-Lancet 65:238 (July) 1945.



Tablets and Elixir

benzedrine sulfate

(*racemic amphetamine sulfate, S.K.F.*)

Smith, Kline & French Laboratories, *Philadelphia, Pa.*

BOOK REVIEWS

BANTING'S MIRACLE: THE STORY OF THE DISCOVERER OF INSULIN, WITH A FOREWORD BY ELLIOTT P. JOSLIN, M.D. Seale Harris, M.D. Cloth, 245 pp. and 33 illustrations. Price, $3. Philadelphia: J. P. Lippincott Co., 1946.

The title to this book is not an overstatement in the light of the prominence accorded the finding and isolation of insulin in commercial quantities, and measured by the specific therapeutic benefits derived. This discovery is one of the great milestones in medical achievement. The discovery of hyperinsulinism and the E. M. F. factor in liver may be listed as side effects. Banting was a farm boy dedicated to the ministry by his family. The association with medical students created a fire in his soul, causing him to study medicine. He was an omnivorous reader with a versatility of innate talents. He was a first rate artist, a musician. He initiated the use of aluminum dust as an antidote to silicosis. He helped to perfect the Frank's flying suit, and was ever in pursuit of "his contagious enthusiasm and stubborn devotion to science." It has been said that "in the field of science chance only favors the mind that is prepared." Banting was a Nobel prize winner conjointly with McLeod, his avowed enemy, but he insisted upon sharing his honors and money with Best, his constant friend and associate in developing the miracle. He was jilted by his boyhood sweetheart because of his poverty and apparent dire future. He was twice married. His untimely death was caused by a tragic airplane accident.

This book is written in such pleasing English it takes the form of a biographical novel. The author, Dr. Seale Harris of Birmingham, Alabama, is well-known and loved both nationally and interuationally. His close friendship with Banting during his life, access to his archives and surviving friends, give him factual matter that is unassailable. Dr. Harris, in his own right as a writer and research worker, is best known through the discovery of hyperinsulinism. This writing therefore was a labor of love.

Dr. Elliott P. Joslin, whose name is synonymous with diabetes the world around, would not have written the foreword to this book had it not been of merit. This book should be read by every medical student, doctor, and diabetic patient. Because of its historical and moral value it should have a popular appeal.—Lea A. Ricly, M.D.

HENRY SEWALL: PHYSIOLOGIST AND PHYSICIAN. Gerald B. Webb and Desmond Powell. Price, $2.75. Baltimore: The Johns Hopkins Press, 1946.

The authors follow the life and works of this beloved physician and scientist in a most pleasing and instructive way. Fortunately, the personality of Henry Sewall shines through the story, leading the reader on as Sewall in life led his friends from fount to fount. The physicians in Oklahoma now in the process of establishing a research foundation should read this interesting story. Sewall's interest in science, his persistent pursuit of truth, and the story of his contacts with the world's great scientists from the inception of scientific research in this country should attract every forward-looking young physician and intrigue every inquiring student of medicine.

The story of Sewall's study under the world's greatest teacher of physiology is well worth the price of the book. Nothing could be more inspiring than to follow the evolution of Sewall's career at Hopkins, the University of Michigan, and later in Denver where he went because of his health. At Michigan he carried out his experiments in immunity against rattlesnake venom. It was this work in animal immunity which later pointed the way to antivenin and diphtheria antitoxin. This informative, stimulating, and inspirational biography should have a wide reading. The authors display a comprehensive knowledge of Dr. Sewall's life, and the fabric they have produced, by weaving into it his varied contacts and influences, makes a beautiful mosaic.—Lewis J. Moorman, M.D.

MUSCLE TESTING, TECHNIQUES OF MANUAL EXAMINATION. Lucille Adams, Mariau Williams, Catherine Worthingham. Philadelphia and London: W. B. Saunders Company, 1946.

The object of this book is to present a quick and ready reference for determiniug and gradiug the extent of muscle weakness. It is based on the necessity of knowing which muscles are responsible for certain specified motions of the trunk and its extremities, especially in the treatment of infantile paralysis. The orthopedic surgeon must rely on physical therapists and other assistants to treat these cases, and this book will prove very reliable and helpful in rendering pictorial informatiou in the forn of a guide to all muscle movements.

The authors present a clear and uuderstandable topography of muscles and their functions. The illustrations are excellent and show clearly, even to the layman, the motions that are brought about by certaiu anatomical structures. The accessory muscles described are especially valuable, provided the examiner has a good knowledge of the anatomy of the prime mover, as well as knowledge of the accessory muscles. Some of the sketches could be more clear in the directions of motions desired while testing them.

This manual will be useful in any orthopedic office where muscular and skeletal weakness is to be diagnosed. It will serve men reviewing anatomy for Board examinations and medical students studying anatomy of the muscles. It is particularly practicable because the illustrations and the text can be referred to quickly, without having to read a great deal of text material to obtain information. No orthopedic surgeon or institution for orthopedic surgery can afford to be without this manual for reference by technicians.—Earl D. McBride, M.D.

PRAYER FOR HEALTH

Almighty God, merciful Father, whose providence is over all thy works, look dowu with pity upon the diseases of my body, and the perturbations of my mind. Give thy Blessing, O Lord, to the means which I shall use for my relief, and restore ease to my body and quiet to my thoughts. Let not my remaining life be made useless by infirmities, neither let health, if thou shalt grant it, be employed by me in disobedience to thy laws; but give me such a sense of my pains, as may humble me before thee; and such remembrance of thy mercy as may produce honest industry, aud holy confidence. And, O Lord, whether Thou ordainest my days to be past in ease or anguish, take not from me thy Holy Spirit; but grant that I may attain everlasting life, for the sake of Jesus Christ our Lord.—Samuel Johnson.

SYMPOSIUM ON ALLERGY

OFFERING THE MISSISSIPPI VALLEY SECTIONAL INSTRUCTIONAL COURSE IN ALLERGY

Monday, May 5, 1947 Through Thursday, May 8, 1947, Inclusive

UNDER THE AUSPICES OF

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE

At The University of Kansas Hospital, W. 39th St., and Rainbow Blvd., Kansas City, Kansas

SPONSORED BY THE AMERICAN COLLEGE OF ALLERGISTS

SCHEDULE OF COURSES AND FACULTY

(subject to minor changes)

MONDAY, MAY 5, 1947

A.M.

8:00- 9:00 Registration

9:00- 9:10 Address of Welcome—Harry R. Wahl, M. D., Dean School of Medicine, University of Kansas

9:10-10:00 Chemistry and Allergy—Russell C. Mills, Ph. D., Ass't Prof. of Biochemistry, School of Medicine, University of Kansas

10:00-11:00 Physiological Aspects of Allergy—Kenneth E. Jochim, Ph. D., Prof. of Physiology, School of Medicine, University of Kansas

11:00-12:00 Antigen-Antibodies As Related to Allergy —Noble P. Sherwood, Prof. Bacteriology, School of Medicine, University of Kansas

12:00-12:15 Orientation—Chairman

P.M.

2:00- 3:00 Bacterial Allergy—Fred W. Wittich, M. D., Minneapolis, Minnesota

3:00- 4:00 Diagnosis of Allergic Diseases—M. Murray Peshkin, M. D., Instructor, College of Physicians and Surgeons, Post Graduate Medical Extension, Columbia Uuiversity

4:00- 5:00 Hay Fever—Diagnosis and Management iu Childreu—Albert Stoesser, M. D., Clinical Prof. of Pediatrics, University of Minnesota, Director of Allergy Clinics at University Hospital and Minneapolis General Hospital

5:00- 5:45 Hay Fever—Specific and Symptomatic Treatment—Lawrence J. Halpin, M. D., Cedar Rapids, Iowa

TUESDAY, MAY 6, 1947

A.M.

9:00-10:00 Botany—Roger Wodehouse, Ph. D., Assoc. Director of Research in Allergy, Lederle Laboratories, Pearl River, New York

10:00-11:00 Bronchial Asthma — Classification and Treatment—Leon Uuger, M. D., Assoc. Prof. Department of Medicine, Northwestern University Medical School, Chicago, Illinois

11:00-12:15 Histaminic Cephalgia aud Migraine—Bayard T. Horton, M. D., Mayo Clinic, Rochester, Minnesota

P.M.

2:00- 3:00 Bronchial Asthma in Infants and Children —M. Murray Peshkin, Instructor, College of Physicians and Surgeons, Post Graduate Medical Extension, Columbia University

3:00- 4:00 Chronic Cor Pulmonale—Complication of Chronic Lung Disease—Mahlon Delp, M. D., Ass't Prof. of Medicine, School of Medicine, University of Kansas

4:00- 5:00 Allergic Rhinitis—French K. Hansel, M. D., Assoc. Prof. Otolaryngology, Washington University

5:00- 5:45 Allergic Rhinitis—Management and Treatment—W. Byrou Black, M. D., Kansas City, Missouri

WEDNESDAY, MAY 7, 1947

A.M.

9:00-10:00 Food Allergy—Orval R. Withers, M. D., Assoc. Prof of Medicine, School of Medicine, University of Kansas

10:00-11:00 Common Air Molds in Relation to Allergy —Homer E. Prince, M. D., Assoc. Prof. of Medicine, Baylor University, School of Medicine, Houstou, Texas

11:00-11:30 Poison Ivy—Lawrence J. Halpin, M. D., Cedar Rapids, Iowa

11:30-12:15 Meniere's Disease—Bayard T. Horton, M. D., Mayo Clinic, Rochester, Minnesota

P.M.

2:00- 3:00 Antibiotics in Allergy—Edward H. Hashinger, Prof. of Clinical Medicine and Director of Graduate Medical Education, School of Medicine, University of Kansas

3:00- 4:00 Skin Allergy Due to Fungi—Charles C. Dennie, Prof. of Dermatology, School of Medicine, University of Kansas

4:00- 5:00 Dermatologic Allergy in Infancy and Early Childhood—Albert Stoesser, M. D., Clinical Prof. of Pediatrics, University of Minnesota, Director of Allergy Clinics at Uuiversity Hospital and Minneapolis Geueral Hospital

5:00- 5:45 Practical Management of Contact Dermatitis—R. L. Sutton, Jr., M. D., Assoc. Prof. of Dermatology, School of Medicine, Uuiversity of Kansas

7:00-10:30 Dinner and Round Table Discussion

THURSDAY, MAY 8, 1947

A.M.

9:00- 9:45 Physical Allergy—Cecil Kohn, M. D., Kansas City, Missouri

9:45-10:30 Status Asthmaticus—Treatmeut—Allan G. Cazort, M. D., Little Rock, Arkansas

10:30-11:00 Pathology of Allergy—Leon Unger, M. D., Assoc. Prof. Department of Medicine, Northwestern University Medical School, Chicago, Illiuois

11:00-11:30 Gastro-intestinal Allergy—Orval R. Withers, M. D., Assoc. Prof. of Medicine, School of Medicine, University of Kansas

11:30-12:15 Value of X-ray in Allergy—Diaguosis and Treatment—Galen M. Tice, Assoc. Prof. of Roentgeuology, School of Medicine, Uuiversity of Kansas

P.M. Laboratory and Clinical Sessions

Laboratory Session; Asthma Clinic; Hay Fever Clinic; Dermatology Clinic; Laboratory Technique

The fee for the course is $50.00 payable at the registration desk, University of Kansas Hospital, W. 39th St., and Rainbow Blvd., Kansas City, Kansas. Applications for the course and for hotel reservations should be placed with the chairman of the Program Committee, Orval R. Withers, M.D., 1418 Bryant Building, Kansas City, Missouri. Doctor Withers has made arrangements for hotel reservations at the following three hotels: Bellerive, 214 East Armour; LaSalle Apartment Hotel, 922 Linwood; and Ambassador Hotel, 3560 Broadway. Only twin bedrooms are available. All physicians interested iu allergy are invited to take thi s course.

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*Levine, S. Z.: J.A.M.A. 128:283, May 26, 1945

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Atoka-Bryan-Coal-Johnston	J. S. Fulton, Atoka	A. T. Baker, Durant	
Beckham	O. C. Standifer, Elk City	J. E. Levick, Elk City	Second Tuesday
Blaine	W. F. Bohlman, Watonga	Virginia Curtin, Watonga	Third Thursday
Caddo	George W. Conover, Jr., Anadarko	Edward T. Cook, Jr., Anadarko	Third Thursday
Canadian	G. L. Goodman, Yukon	Jack W. Myers, El Reno	Subject to Call
Carter	J. Hobson Veazey, Ardmore	J. Hobson Veazey, Ardmore	Second Tuesday
Cherokee	P. H. Mellearis, Tahlequah	R. K. McIntosh, Jr., Tahlequah	First Tuesday
Choctaw	Reed Wolfe, Hugo	Fred D. Switzer, Hugo	
Cleveland	Orville Woodson, Norman	T. A. Ragan, Norman	Thursday nights
Comanche	Leslie T. Hamm, Lawton	Byron W. Aycock, Lawton	Third Tuesday
Cotton	G. W. Baker, Walters	Mollie Seism, Walters	Third Friday
Craig	P. L. Hayes, Vinita	J. M. McMillan, Vinita	
Creek	O. H. Cowart, Bristow	F. H. Sisler, Jr., Bristow	Second Tuesday
Custer	Willard H. Smith, Clinton	D. W. McCauley, Clinton	Third Thursday
Garfield	Francis M. Duffy, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	Thomas F. Gross, Lindsay	John R. Callaway, Pauls Valley	Wednesday before Third Thursday
Grady	R. R. Coates, Chickasha	Wesley W. Davis, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	F. P. Robinson, Pond Creek	
Greer	Dwight D. Pierson, Mangum	J. B. Hollis, Mangum	
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis	First Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams McCurtain	
Hughes	Victor W. Pryor, Holdenville	L. A. S. Johnston, Holdenville	First Friday
Jackson	E. W. Mabry, Altus	J. P. Irby, Altus	Last Monday
Jefferson	J. A. Dillard, Waurika	O. J. Hagg, Waurika	Second Monday
Kay	E. C. Mohler, Ponca City	Edwin Yeary, Ponca City	Second Thursday
Kingfisher	John R. Taylor, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	J. Wm. Finch, Hobart	R. F. Shriner, Jr., Hobart	
LeFlore	S. D. Bevill, Poteau	Rush L. Wright, Poteau	
Lincoln	J. S. Rollins, Prague	Ned Burleson, Prague	First Wednesday
Logan	James Petty, Guthrie	J. E. Souter, Guthrie	Last Tuesday
Mayes	E. H. Werling, Pryor	Paul B. Cameron, Pryor	
McClain	I. N. Kolb, Blanchard	W. C. McCurdy, Purcell	
McCurtain	J. T. Moreland, Idabel	R. H. Sherrill, Broken Bow	Fourth Tuesday
McIntosh	F. R. First, Checotah	W. A. Tolleson, Eufaula	Third Thursday
Muskogee-Sequoyah-Wagoner	W. P. Fite, Muskogee	William N. Weaver, Muskogee	First Tuesday
Noble	A. M. Evans, Perry	J. W. Driver, Perry	
Okfuskee	L. J. Spickard, Okemah	M. L. Whitney, Okemah	
Oklahoma	F. Redding Hood, Oklahoma City	George E. Kimball, Oklahoma City	
Okmulgee	John Cotteral, Henryetta	C. E. Smith, Henryetta	Fourth Tuesday
Osage	R. O. Smith, Hominy	Gayfree Ellison Pawhuska	Second Monday
Ottawa	B. Wright Shelton, Miami	W. Jackson Sayles, Miami	Third Monday
Pawnee-Payne	C. H. Haddox, Pawnee	C. W. Moore, Stillwater	Second Thursday
Pittsburg	Homer C. Wheeler, McAlester	Edward D. Greenberger, McAlester	Third Friday
Pontotoc-Murray	E. D. Padberg, Ada	Ollie McBride, Ada	First Wednesday
Pottawatomie	Charles F. Paramore, Shawnee	Clinton Gallaher, Shawnee	First and Third Saturday
Pushmataha	John S. Lawson, Clayton	B. M. Huckabay, Antlers	
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	
Seminole	Claude B. Knight, Wewoka	Mack I. Shanholz, Wewoka	Third Wednesday
Stephens	Everett King, Duncan	Fred L. Patterson, Duncan	Third Wednesday
Texas	Daniel S. Lee, Guymon	E. L. Buford, Guymon	
Tillman	G. A. Tallant, Frederick	O. G. Bacon, Frederick	
Tulsa	E. O. Johnson, Tulsa	John E. McDonald, Tulsa	Second and Fourth Monday
Washington Nowata	Thomas Wells, Bartlesville	L. B. Word, Bartlesville	Second Wednesday
Washita	A. H. Bungardt, Cordell	Aubrey E. Stowers, Sentinel	
Woods	C. A. Traverse, Alva	O. E. Templin, Alva	Last Tuesday Odd Months
Woodward	Myron England, Woodward	C. W. Tedrowe, Woodward	Second Thursday Even Months

THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

THE HOXSEY HOAX

Since the State Medical Journal reaches only the doctors, their families, and their immediate associates, its columns cannot be successfully employed for lay publicity. Attempting to inform Oklahoma physicians about the evils of vaunted cancer cures and the quacks who sponsor them would be superfluous. But those who do not read the American Medical Journal and do not have a newspaper clipping service may not know that our own Senator Elmer Thomas has made a so-called investigation of the Harry M. Hoxsey Cancer Clinic in Dallas, Texas, and according to the J.A.M.A., "he is now circulating throughout the nation a transcript of the proceedings of that visit. He has been able to get a commission appointed in Oklahoma consisting of state legislators and senators, who it is said will visit his [the Hoxsey] clinic and pass on his technics. The action of the joint legislative committee of Oklahoma is unparalleled in recent history, although some Ohio legislators almost a century ago tried to pass on a cure for asthma.

"According to the newspaper reports the Oklahoma legislative committee consists of five senators and five house members who will make the junket accompanied by Dr. Grady Mathews, health commissioner. Dr. Louis H. Ritzhaupt of Guthrie, Okla., who is a Fellow of the American Medical Association and a surgeon, according to the newspapers, told the state legislature that he thought the medical profession of Oklahoma 'was open to any suggestion' and said he was sure that 'scientific minds would be willing to go into the treatment' and offered no objection to the committee making the trip." In view of the findings of the A.M.A. Bureau of Investigation, the proposed trip to Dallas may be superfluous, but Dr. Ritzhaupt's statement that the Oklahoma medical profession is open to suggestions and not afraid of the investigation is in line with our medical traditions.

After making this statement, the J.A.M.A. presents the whole history of the Hoxsey cure, back to Harry M.'s father, John C., who was advertising a cancer cure as early as 1910. The J.A.M.A. details the son's record through the courts across the continent down to his association with osteopaths in Dallas. Much of this data was published in a previous issue of the J.A.M.A.

As soon as the newspaper publicity was called to the attention of the Editorial Board of the State Medical Journal, the Editor entered into correspondence with Senator Thomas. It was frankly stated that we had only newspaper accounts and would appreciate an expression from him before commenting on his investigation in the columns of the Journal. It would be interesting to reproduce this correspondence, but it would not offer a solution to this embarrassing situation.

Since laymen deemed it necessary to appeal to senators and representatives for information about this alleged cancer cure, and since the legislators did not think enough of their family physicians to seek advice from them, is it not time to take stock and ask the question: "What's the matter with medicine in Oklahoma?"

Since the important indictments against the alleged Hoxsey cancer cure disclosed by the A.M.A.'s Bureau of Investigation had not been sufficiently publicized in Washington to reach Senator Thomas' attention, is it not time for the American Medical Association to wake up and get about its business of educating the public. It seems not out of place to say

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that Oklahoma's delegates to the A.M.A. introduced a resolution in the House of Delegates last year urging wide dissemination of knowledge concerning medicine's accomplishments in order that the people may know the truth and be served and protected by the truth about medicine.

Since the Oklahoma and Texas divisions of the American Cancer Society have permitted this so-called cancer clinic on our border to operate unchallenged, is it not time for this organization to take cognizance of this menace and perhaps consider spending some of its money to supplement the work of the A.M.A. Bureau of Investigation and bring the truth to the people. In view of what has happened, may it not be justly said that looking into the operations of this cancer clinic should have been one of the main objectives of these two units of the American Cancer Society.

Since the publicity concerning this cure indicates that many patients have gone to the Hoxsey Clinic after consulting their local physicians, is it not time for the individual members of the Oklahoma State Medical Association to consider their own shortcomings, including their inability to inspire confidence and retain the respect and the continued patronage of their patients.

Having acknowledged our imperfections, and admitting the need of a cure for cancer, we hasten to say that we are not expecting this cure to come out of Congress. Senator Thomas' constituents would be happy to have him make a thorough investigation in his own field and remove a few cancers from the body politic and protect it from the malignant neoplasm of socialized medicine.

THE FIFTY-FOURTH ANNUAL MEETING

At the Mayo Hotel in Tulsa on May 14, 15, and 16, the doctors of Oklahoma will gather for the 54th Annual Meeting of the Medical Association. A survey of the program suggests that this will be an exceptionally good meeting. The scientific part of the program is well balanced. The limited number of section meetings will give every physician in attendance an opportunity to get a firm hold upon well-integrated medicine and surgery including the leading specialties. Considering the recent grand marathon away from general practice and toward the Boards of Certification, it will be good for those who have devoted all their time and energy in a highly specialized field to listen to a generalized program. Instead of meeting doctors dodging from one section room to another in search of their own small groups seeking additional knowledge in a narrow field, it will be a relief to find them assembled in one hall for a comprehensive discussion of medical problems.

In all fairness to the growing specialties there has never been a time when the physicians and the people were so in need of a broad comprehensive grasp of medical problems. This diversified program offers the members of the State Association an unusual opportunity. Here is a chance for intensive postgraduate work with a minimum of time and cost. Distinguished visitors from all sections of the country are bringing to this meeting the very best in medical science. Their appearance on the program has been so carefully and appropriately planned that there can hardly be a dull moment. It is anticipated that visiting and local talent will click harmoniously, intellectually and scientifically for the edification of all who attend. The physicians of Oklahoma owe it to themselves and their patients to attend this meeting.

On the cover of this issue of the Journal the reader will find the dates, location, and the headquarters. If it seems difficult to get away from practice for this meeting, remember that the officers, committees, and staff members have spent days and weeks making the physical arrangements and building the scientific program. There must be a good reason for the expenditure of all this time and effort. You are it. Answer "present" when the roll is called.

ON TRIAL

The Oklahoma Research Foundation is calling upon the medical profession for generous support before appealing to the public in behalf of the Foundation. There is little hope of success unless the members of the State Medical Association invest money in this plan, which will advance medicine's position at home and abroad. Lay people with their limited knowledge of research cannot be expected to make big gifts if the physicians fail to manifest faith supported by funds. Many times during the past 50 years the members of the State Medical Association have been on trial, but in the eyes of the people this is the crucial test. Shall we cover this golden opportunity with a little golden quid, or shall we court ignominious failure?

SCIENTIFIC ARTICLES

THE OVERWEIGHT OBSTETRIC PATIENT WITH SPECIAL REFERENCE TO THE USE OF DEXEDRINE SULFATE*

J. WILLIAM FINCH, M.D., F.A.C.P.

HOBART, OKLAHOMA

The obese patient has always been a problem to the physician who recognizes that obesity predisposes to heart disease, hypertension, diabetes, poor posture with its resulting pains, etc., but the obese pregnant patient offers a multiplicity of problems. Not only does the obesity still tend to be a predisposing factor to pathology as in nonpregnancy, but in pregnancy the obesity often tends to become much more pronounced than in nonpregnancy, and there looms the hazard to both mother and child of delivering the patient whose birth canal is obstructed by a large volume of fat.

Authorities have all indicated that the normal patient should gain from 15 to 20 pounds during pregnancy and that the patient gaining more than that amount should be put on a restricted diet. They have also indicated that the patient who is obese when she becomes pregnant should be put on a restricted diet and that her weight at delivery should be no more or perhaps less than when pregnancy began.

This is all true, but the mere instruction of the patient to restrict her diet to 1,000 calories per day is far from the answer to weight control. Many factors enter into obesity and especially into obesity associated with pregnancy. Foremost of these factors is overeating. Obesity cannot occur without ingestion of too much food. Many women in pregnancy think that they have to "eat enough for two." Many others, forced to spend more time at home because of their pregnancy, eat all day long, merely from boredom. Lack of exercise contributes to their increased weight. Increased estrogen level during pregnancy increases fluid retention. The fluid retention plus the increased caloric intake and resulting increased weight tends to bring about a relative thyroid deficiency even in a patient not truly myxoedematous.

The only way this situation may be corrected satisfactorily is through cooperation of the patient by reducing the diet drastically, and if necessary, by fluid limitation. The only way in which this cooperation may be assured is (1) by explaining to the patient the necessity of reducing the weight and (2) by helping her to control her appetite.

Many drugs have been used for the control of appetite with varying degrees of success. Lesses and Myerson were the first to show that amphetamine, which is an adrenergic drug, would depress the appetite. Subsequently, amphetamine sulphate, a racemic mixture, was separated into two optically active isomers, one of which was dextro-rotatory and the other levulo-rotatory. These two substances were independently investigated for their appetite-inhibitory action. Previously, with the racemic amphetamine, certain undesirable effects were encountered. These consisted of insomnia, irritability, "edginess," tenseness, and occasionally gastro-intestinal irritability. These exciting factors were found to predominate in l-amphetamine. On the other hand, the d-amphetamine was found to include most of the appetite depressant activity.

The mechanism of action of d-amphetamine (Dexedrine) has been shown to be from (1) stimulation of motor activity, encouraging the patient to take more exercise, do more work etc., (2) depression of hunger motility and slowing of stomach emptying, (3) stimulation of hypothalmus affecting appetite and increasing fat metabolism, and (4) improvement of the mood, very useful in the patient who eats from boredom.

I wish to report the treatment of seventy

*Presented before the Section on Obstetrics and Gynecology of the Oklahoma State Medical Association at the Annual Meeting, May 2, 1946.

cases of obesity during pregnancy in which dexedrine sulfate was used for the control of appetite. Eight of these cases were markedly obese before becoming pregnant and the dietary regimen was instituted during the first trimester. Forty-six cases were unable to control their weight by diet alone during the second trimester and received dexedrine during the second and third trimester. The remaining 16 cases did not start to gain excessively in weight until the last trimester and were under control for the last two or three months of pregnancy only.

Of the eight patients who were obese at the beginning of pregnancy, every one of them weighed less at delivery than at the onset of pregnancy, the smallest loss being two pounds and the largest being 16 pounds with an average loss of weight of nine and one-half pounds.

Of the 46 patients gaining too rapidly during the second trimester, a large percentage were slightly overweight at the onset of pregnancy and began to gain well over the accepted four pounds per month for the normal obstetric patient in the second trimester. The average total gain of weight during the entire pregnancy for this group was 7.8 pounds, the greatest gain being 23 pounds and the smallest gain being one pound.

Of the group of 16 patients who were able to control their weight until the last trimester and who then began to gain more than the three pounds per month which is the normal maximum, six patients were held to no further gain, and the remaining ten patients lost from two to 11 pounds during the last three months of pregnancy. One of these, a patient with twins, held her weight increase to 26 pounds. The average total gain for the entire nine months of pregnancy for the entire series of 70 cases was 7.4 pounds.

As a control series, 50 successive obstetrical cases were selected from my files during the year preceding the use of dexedrine to control obesity. These patients had been given the same diet instructions, but their average gain in weight for the entire nine months of pregnancy was 28.6 pounds, the smallest gain being 18 pounds and the largest being 54 pounds.

Of the 70 cases whose weight was controlled by the use of dexedrine sulfate there were no fetal abnormalities and no fetal or maternal deaths. The babies were all well nourished and normal size. Many of the patients who had been quite obese at delivery with previous pregnancies had easy deliveries compared with previous difficult deliveries. Almost without exception, the entire series was most grateful for the control of weight, in that they felt much better, were physically more active as well as attractive, and following delivery their figures were as good or better than before they became pregnant. Of perhaps equal importance is the fact that almost all of these women continued to control their weight following delivery mainly because they had corrected bad eating habits during their months of low calory, high residue diet. They no longer craved sweets and fats but had become accustomed to a high protein diet with adequate fresh vegetables and fruits.

DETAILS OF TREATMENT

Patients were first given a list of foods which were to be avoided, a list of those which were to be eaten sparingly, and a list from which food could be chosen freely. They were advised as to the caloric content of the foods so that they could fairly closely adhere to 1,000 to 1,200 calories daily. The use of bulky, low-caloric food was stressed. Each case received one gram of protein daily for each pound of ideal weight. A multivitamin capsule of adequate dosage for a well-balanced diet was given daily. In patients who were constipated, psyllium seed in some form was given before a meal once or twice daily to add to stomach and intestinal bulk as well as for its laxative effect.

The patient was also instructed to eliminate from the diet those substances which whet the appetite, especially alcoholic beverages and condiments. The avoidance of carbonated beverages because of their sugar content was explained.

Two and one-half to five mg. of dexedrine sulfate was given one hour before each meal. If this was not sufficient to curb the appetite, the patient was instructed to double the dose in a week. The weight of each patient was checked weekly, and if the appetite was not sufficiently under control or if the weight control was not satisfactory, the dose of the dexedrine was increased to a maximum of 15 mg. three times daily. The average daily dose was 30 mg., given ten mg. one hour before each meal. This spacing of the drug one hour before meals was found to be more satisfactory than a lesser interval if the full appetite inhibiting effect was to be obtained.

About one-half of the patients complained of mild side effects, such as "jitteriness," palpitation, and insomnia. These symptoms

were all relieved with ¼ to ½ grain of phenobarbital given with each dose of the dexedrine. It has been shown that dexedrine offsets the sedative effect of phenobarbital and that phenobarbital offsets the pressor effect of dexedrine about grain for grain. Patients who were refractory to weight loss and all patients in the last month of pregnancy were further instructed to moderately restrict their fluid intake and to eat a salt free diet. They were given 45 grains of ammonium chloride daily in enteric coated tablets if satisfactory dehydration was not obtained by salt and fluid restriction.

All patients had a complete examination including blood study at the onset of pregnancy, and those with a dry skin, slow pulse, splitting nails, etc., had their basal metabolic rate determined. The original readings ranged from minus 26 to plus 14 with an average of minus three. An average of readings taken on these same patients when taking from 15 to 45 mg. dexedrine daily was plus four. Thus, dexedrine apparently has very little effect on the basal metabolic rate. Emerson gave dexedrine to eleven young adults in doses of 20 mg. and recorded pulse rate and oxygen consumption after 30, 60, 120, and 180 minutes. In three cases there was a decrease in the BMR. In eight there was a slight increase. The average maximum increase was 11.5 per cent with the average total effect being minus 1.5 per cent. I feel that the slight increase in BMR in my series of cases was probably due to a correction of relative hypo-thyroidism through weight loss rather than through a direct action of the drug. The cases whose BMR was below minus ten were given thyroid extract in appropriate dose in addition to the dexedrine.

Blood pressure was checked at each visit and no effect of the drug was noted on blood pressure except in six cases who had a hypertension with a marked obesity in early pregnancy. In each of these six the blood pressure was reduced to normal as the weight fell and remained normal throughout pregnancy and after delivery. The fall was in direct proportion to the amount of weight lost. No hypertension other than in these six cases was encountered.

In the entire group there was better than usual cooperation in the matter of taking exercise. I think that this was because of improved mood and increased energy induced by the drug.

CONTRAINDICATIONS

Dexedrine sulfate should not be used in patients hypersensitive to ephedrine-like compounds, in those manifesting anxiety or hyper-excitability, or in agitated pre-psychotic states.

There is no apparent effect on hypertension, and the drug can be used freely in hypertensives with obesity as the lowering of the pressure accompanying the loss of weight will more than offset the slight increase from any pressor effect.

Careful studies have shown no toxicity of the drug until many times the usual dose is used. The minimum lethal dose in laboratory animals has been shown to be 20 mg./kg.

The development of tolerance to the favorable central effects of amphetamine sulfate has suggested to many authors the danger of addiction.

Davidoff and Reifenstein have observed certain unstable individuals sometimes develop a confirmed amphetamine habit. I have used this drug on over 400 patients (including a large series of obesity associated with various disorders other than pregnancy) and I have never found anyone who refused to discontinue the drug. As regards unstable individuals, dexedrine would seem to be hardly more dangerous in their hands than caffeine. Drugs which stimulate the higher functions may lend themselves to the foundation of a habit. Since such a habit may become excessive, it is wise to control the sale of powerful stimulants such as dexedrine, especially to the unstable type of individual.

The practice in my series of cases has been not to withdraw the drug suddenly, for when this is done every patient complains of a "let down" feeling to a marked degree. I have found, however, that when the drug is withdrawn gradually over a two or three weeks' period, no inconvenience is experienced. I have never found any patient with a craving or ungovernable desire for the drug.

SUMMARY

1. Seventy obese pregnant patients who had proved refractory to weight reduction or weight control were given dexedrine sulfate in conjunction with a low calory diet, with resulting satisfactory appetite control. Loss of weight or control of weight was satisfactory in each case.

2. Treatment was aimed at correcting eating habits so that the patient would have less desire for high caloric foods, even after medication was discontinued.

3. Thyroid extract, ammonium chloride, low salt diet, and fluid restriction were used as adjunctive measures.

4. There was no appreciable effect on blood pressure or basal metabolic rate.

5. Dexedrine sulfate is a nontoxic safe drug which may safely be used in obstetric patients to aid them in preventing excessive gain of weight.

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CHOICE OF CARBOHYDRATES USED IN ARTIFICIAL FEEDING OF INFANTS*

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In this discussion I shall limit what I have to say to the consideration of the more common sugars used in infant feeding, either singly or in mixtures, and discuss a few of the indications for their use.

The old historical principle of diluting cow's milk to decrease the percentage of fat and protein, to simulate the amount contained in breast milk, and the adding of carbohydrate still holds good.

Practically all of the difficulties encountered in the artificial feeding of apparently normal infants are due to the improper choice of the sugar used in the individual case. It may also be said that the fat or protein in the milk formula is rarely at fault. Frequently a diagnosis of pylorospasm or some other pathological condition is made when the difficulty encountered is due to the use of a carbohydrate or sugar not suited to the particular case, or a mixture of sugars is used in which the relative amounts of carbohydrate are not properly balanced.

Time does not permit a discussion on the choice of formulas to be used in various pathological conditions, such as pylorospasm, pyloric stenosis, celiac disease, etc.

In the approach to this subject a few fundamental facts must be recalled. Carbohydrate is an essential element in the infant dietary since it is the most available source of energy, and in the fast growing and overactive infant, it may have to be fed in unusually high percentages, both for energy requirements and also that it may be used to spare protein and fat in the presence of acute or chronic illness or where underfeeding has been necessary or the infant has become accustomed to taking smaller amounts of food than usual. Since it may be necessary under certain conditions to add sugar in relatively larger amounts than normal, the choice of the one to be used becomes important, and particularly in the case of recent illness or if diarrhea is present.

Sugars are classified chemically as mono- and disaccharides, which concerns the rapidity of digestion and absorption. Two molecules of the former constitute the disaccharides, chief of which are sucrose, (cane or beet sugar), lactose or milk sugar, and maltose. These disaccharides cannot be absorbed as such, but must be broken down in the intestine to monosaccharides, chiefly dextrose. As previously stated this process must take place before ultimate utilization or absorption.

In order to properly use a sugar, or a mixture of sugars, it is necessary to consider their characteristics individually in order to calculate their action and effects in a mixture.

For practical use the following points should be considered: (1) Ease and rapidity of digestion. (2) Rate of fermentation in the intestinal tract. (3) Laxative effect. (4) Of less importance, their relative sweetness.

Lactose is not as sweet as cane or beet sugar or any of the other sugars commonly used, and therefore does not accustom the infant to unusual sweetness of food. It may

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also be used when the infant apparently has a distaste for the usual sweetness. Lactose is readily fermented by most of the normal intestinal bacteria with the formation of acid products, chiefly lactic. It is not digested and absorbed as rapidly as some other sugars, and as a result large amounts may pass to the large intestine before absorption, with the production of irritating products. This occurs particularly in infants having an overactive peristalsis. For those reasons when large amounts of carbohydrate are desirable, lactose may cause an irritation of the intestinal tract, per se, or by its acid products, resulting in too frequent stools, and an overproduction of gas.

Cane or beet sugar has the same nutritive effect as lactose. It is sweeter and has less of a bitter taste. It is more quickly digested and absorbed from the intestinal tract than is lactose, but is not so readily fermented by most intestinal bacteria. It is not so laxative as milk sugar or any of the other commonly used ones and consequently may be fed in relatively larger amounts. When a high percentage of carbohydrate is needed, because of its slower ferment action and the high concentration, it may cause an intestinal irritation. In dilute solutions it is apt to have the opposite effect.

Pure maltose is seldom used in infant feeding, but is used in mixtures containing dextrose and dextrins. Maltose is very readily fermented by most intestinal organisms. It breaks down very rapidly but the fermentation products which result seem to be considerably less irritating than those of either cane or milk sugar. It is extremely laxative, and is therefore, a very useful adjunct in mixtures for use in cases where constipation is a prominent factor. Mead's Dextri-maltose, and Mellin's food both have large amounts of Maltose, 55 per cent and 58 per cent, respectively, but Dextri-maltose contains twice the amount of dextrins, 42 per cent and 20 per cent respectively.

Dextrose or glucose requires no digestion and is rapidly absorbed as such. It is easily fermented and quickly absorbed. Fairly large amounts may be added with safety due to its quick absorption and its chief objection lies in its use in those patients who seem to be intolerant to carbohydrates, for it may be irritating to the intestinal tract, per se.

One of the most important and one of the most valuable carbohydrates to be considered is dextrin. Chemically it is an intermediate product between starch and the disaccharides. When starch undergoes digestion in the intestinal tract, it is converted first to dextrins, then to maltose and finally dextrose.

When starch is subjected to the action of malt diastase, this breaking down process proceeds as far as maltose. The process may be stopped at any point, which varies the amount of dextrin and maltose present and this variation is an important point in the selection of the product to be used. The properties of the various malt preparations depend on the relative proportion of dextrin and maltose present, the percentage of maltose usually ranging from 30 to 90 per cent. When this mixture is used we have two sugars which are somewhat opposite in their action, the rate of fermentation and absorption of dextrin being slow, with a tendency toward constipation, while the rate of fermentation and absorption of maltose is very rapid and is also very laxative.

When starch is heated in the presence of acid this breaking down occurs through all the successive stages and may be carried to the point of commercial corn syrup which contains approximately 50 per cent dextrin, 30 per cent maltose, and 10 per cent dextrose, the dark being flavored with refiner's syrup and the light with cane syrup.

Dextrin has a somewhat bitter taste. It is not very irritating even in high concentrations, is not fermented by most intestinal bacteria, and is fairly readily converted to maltose through the action of enzymes normally present in the intestinal tract. It is converted no more rapidly than it can be digested or absorbed. Consequently, when dextrin is fed there is not a great deal of readily fermentable carbohydrate present in the intestinal tract at any time which could lead to intestinal fermentation and gas. For these reasons dextrin is very useful in the treatment of and prevention of diarrhea. It may be given in much larger amounts than any other carbohydrate without untoward results when such a need exists, and its nutritive value is just as great. Dextrin is seldom used alone, but in mixtures varying from one to 75 to 80 per cent. Two every widely used commercial products are Mead's Dextri-Maltose and Burroughs Wellcome's Dexin.

The accompanying table gives the percentages of a few products on the market:

	Dextrin	*Maltose*	*Dextrose*	*Cane Sugar*
Karo	50%	30%	10%	10%
D. Maltose	42%	55%		
Dexin	75%	24%		
Mellin's Food	21%	59%		

Cartose is very similar to Karo but has less tendency to cause diarrhea or excessive fermentation with gas formation.

It is not my intention to condemn or advocate any commercial product but to emphasize the clinical importance of certain percentage mixtures. Most of us are forced to apply our formulas without the benefits of laboratory examination as to the amount and kind of intestinal bacteria, but must depend solely on objective findings and observation.

In many or most apparently normal infants with apparently normal intestinal bacteria, the margins of tolerance to any and all sugars is very wide. In fact, these babies can take almost any formula with good results.

Finally, although lactose is the sugar found in breast milk, when used in artificial feedings it has been found far from satisfactory, chiefly because of its tendency to gas formation and it cannot be used in very large amounts. I have never been able to use it with very good results and have practically abandoned its use.

Cane sugar does very well in most cases. Under normal conditions it is satisfactory from an economic standpoint and is adaptable where an infant seems to prefer sweet formulas and, for various reasons where energy requirements are high, it may be given in large amounts without diarrhea, but in the normal infant it may lead to constipation in the amounts that are usually fed.

It is the general opinion of most nutritionists that a mixture is more satisfactory than the use of a single sugar. My own experience has taught me that a mixture containing those sugars with a slow rate of fermentation and ranging upward to those with a rapid rate such as dextrose is most satisfactory. The intestinal functions are never overworked and the various stages of fermentation, digestion, and absorption are all going on at the same time with the result that clinical manifestations of normal function are present, with a normal number and character of bowel movements, normal amount of intestinal gas, no colic, and above all, a happy infant.

Corn syrup is probably the most widely used carbohydrate in artificial feeding and in most cases it is satisfactory except where there is an apparent sugar intolerance.

Dexin has become almost routine with me. It contains 75 per cent dextrin and 24 per cent maltose. It fulfills all the requirements as to nutritive value and may be fed in larger amounts than any other single sugar or mixture of sugars. In those cases where dexin produces constipation I usually supply half the usual amount (10 per cent of the amount of milk used) with a mixture containing a larger amount of maltose such as Dextri-Maltose or corn syrup.

I feel that all of our difficulties are due to too rapid fermentation with its resulting irritation. If we use a mixture containing the principal sugars, vary the amount or relative amounts of dextrin and maltose to meet the individual case, whether it be constipation or diarrhea, or large amounts of gas with colic, and keep in mind the characteristics of each carbohydrate use, our feeding problems will be more easily solved.

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INFECTIOUS MONONUCLEOSIS: BENIGN LYMPHADENOSIS OR GLANDULAR FEVER*

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Infectious mononucleosis is an important disease entity, not so much from the standpoint of mortality and morbidity, for in this disease these two factors have a very low percentage, but from the standpoint of differential diagnosis and the fact that the physician may not keep this condition in mind.

Due to the time allotted I will not discuss this disease in its entirety but will dwell more on the serology and the differential points which are gained therefrom.

Infectious mononucleosis has been known under different names since 1889, when it was described by E. Pheiffer as glandular fever. Thirty-four years later, Tidy and Daniel and Downey and McKinlay described the characteristic blood changes and inaugurated the hematologic diagnosis of infectious mononucleosis. The blood changes are very helpful in the recognition of the disease, but they are not pathognomonic. Similar changes are found in several clinically unrelated diseases, particularly acute infections of the pharynx. Furthermore, in the early stages of infectious mononucleosis, the characteristic elevation of the mononuclear cells may be absent and the blood picture may show merely a slight to moderate increase of the total number of white cells with a normal differential count.

A second phase in the diagnosis of infectious mononucleosis was initiated in 1932 by Paul and Bunnell, when they found that the blood serum of the patients is able, even in high dilutions, to clump sheep red cells.

It has been known for a long time that the blood serum of a large majority of persons is able to lake and to clump the erythrocytes of the sheep, but only in very low dilutions. It has also been known that the lytic and agglutinative power of human blood serum rises considerably after the injection of horse serum, normal or immune, particularly if followed by serum disease. It was in the course of checking observations in horse serum disease that Paul and Bunnell discovered the presence of similar antibodies in infectious mononucleosis.

The hemolysins and agglutinins of normal persons and of persons injected with horse serum are called heterophilic antibodies. The term "heterophilic" refers to the property of such antibodies to react with an antigen (sheep erythrocytes) that seemingly had nothing to do with their development. They possess that property in addition to the ability to react with the hemologous antigen. Some heterophilic antibodies are specifically removed from human or animal serum by the tissues of various animals (guinea pig, horse, chicken, and others) and by some bacteria (pneumococci, dysentery bacilli, and others). The antigen in these animals and bacteria is known under the name of its discoverer as the Forssman heterophilic antigen. It is well to remember that there are varieties of heterophilic antigens and antibodies that differ from the Forssman type.

It was shown by proper absorption tests that the antibodies against sheep red cells in normal persons and after horse serum therapy are of the Forssman type and by analogy it was assumed by many writers that the antibodies in infectious mononucleosis are also of that type.

In view of the fact that nothing definite is known at present about the etiology of infectious mononucleosis and that the morphologic changes in the blood are characteristic but not absolutely specific for the disease, the study of the antibodies in the blood serum offers a basis for recognition as well as for classification of the disease. It may be that the finding of the etiologic factor will modify or even nullify the significance of the sero-

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logic changes in infectious mononucleosis. It may then become apparent that we are dealing here with more than one disease. However, until such time, considerable help can be derived from what is already known about the heterophilic antibodies in mononucleosis.

The agglutination test is especially valuable in the diagnosis of atypical cases of infectious mononucleosis.

According to the work of Israel Davidsohn, M.D., of Chicago, the failure of the guinea pig kidney to remove the agglutinins for sheep erythrocytes from the serum of patients with infectious mononucleosis establishes that the heterophilic antibodies in that disease are not of the Forssman type. The readiness with which beef erythrocytes removed the antibodies in serum disease is contrasted with their failure to do it in normal serum. It is apparent that absorption with beef erythrocytes cannot be employed for the separation of infectious mononucleosis from serum disease, but that absorption with guinea pig kidney can clearly differentiate the two conditions. Removal of the agglutinins for the erythrocytes of sheep with beef erythrocytes and the failure of the guinea pig kidney to remove them completely establishes the diagnosis of infectious mononucleosis, while removal of the sheep agglutinins with the guinea pig kidney excludes mononucleosis. That the absorption of the same serum with the guinea pig kidney offers a convenient method for the differential diagnosis of infectious mononucleosis will be illustrated by concrete examples.

The diagnostic difficulties in mononucleosis can be divided into five groups. To the first group belong the patients with an atypical, frequently very severe and alarming course and with rare complications. Here belong also the patients who do not show the usual increase in the numbers of the mononuclear cells in the early stages of the disease.

ACTUAL CASE REPORTS BY DAVIDSOHN

Infectious mononucleosis resembling agranulocytosis. A college student, age 18 years, had been taking for some time aminopyrine for menstrual pains and headaches. She was suddenly taken ill with chills, fever, swelling of the pharynx. The white blood count was 1,500 with 15 per cent granulocytes. The diagnosis of granulocytosis was made. It was then decided to carry out the agglutination test for heterophilic antibodies. It was strongly positive (1:896+). The diagnosis was changed to infectious mononucleosis. The patient recovered soon afterward. The leukopenia disappeared early; the white count on the fifth day was 9,300. The mononucleosis persisted for many weeks and showed from 60 to 80 per cent lymphocytes.

Infectious mononucleosis with features of an acute abdominal condition and of an acute leukemia: absence of a mononucleosis in the first blood count. A college student, age 18 years, was admitted, complaining of severe abdominal pains, nausea, vomiting, and fever. Six weeks before admission she had a skin eruption diagnosed as measles. The lymph nodes of the neck were slightly enlarged but not tender. The left upper part of the abdomen was extremely tender. Blood examination revealed 6,720 white blood cells, with 51 per cent neutrophilic and three per cent eosinophilic leukocytes and 46 per cent lymphocytes. On the following day the fever assumed a septic character. The percentage of mononuclear cells rose to 58. An acute abdominal condition was suspected. An exploratory operation was considered imminent if improvement should not take place in a few days. Six days later a marked change in the blood took place: the white cells rose to 12,600 and the mononuclear cells to 93 per cent; eight per cent among them resembled lymphoblasts. That, together with the serious clinical condition, made it necessary to consider acute leukemia. However, the test for infectious mononucleosis was then found to be positive (1:224). The attending physician was thus able to give a favorable prognosis. The patient made a rapid and uneventful recovery and has been well since. Various laboratory tests were negative. They included blood cultures, blood chemistry, Wassermann and Kahn tests, coagulation and bleeding time, and agglutinations for typhoid, paratyphoid, dysentery, and undulant fever. Repeated blood counts were carried out during the patient's illness. The mononucleosis persisted until her discharge. It varied from 80 to 93 per cent.

In this case the agglutination test established the diagnosis of infectious mononucleosis; without it the patient might have been subected to an exploratory operation.

Infectious mononucleosis with an acute gastritis, hepatitis, jaundice, with a severe toxemia and acute heart failure. A man, age 37, was admitted complaining of gastric distress for about six weeks. He lost six pounds (2.7 Kg.) in the last two weeks. He had a history of rheumatic heart disease in the past. Moderate jaundice, slightly enlarged

but not tender lymph nodes of the neck and axillae, and an enlarged spleen and liver were found. The heart was enlarged and the changes were those of a mitral endocarditis. There were 16,250 white cells with 84 per cent mononuclear cells and among them eight young cells resembling lymphoblasts. The temperature kept on rising steadily, the pulse rate went up to 150, and the patient became very toxic. Pulmonary edema developed and the patient was considered critically ill. In addition to an acute endocarditis, acute leukemia and infectious hepatitis were considered. At that time the high percentage of lymphocytes in the differential blood smear suggested the test for infectious mononucleosis. It was strongly positive (1:896). The result surprised all who attended the case and was accepted with a considerable measure of doubt. On the seventh day a dramatic turn for the better took place, with a sudden drop of the temperature. The jaundice reached a maximum on the ninth hospital day (icterus index 42 with a biphasic van den Bergh reaction) and then declined gradually. The patient was discharged on the twenty-fourth day. He remained well. His blood was studied repeatedly after his discharge during a period of 296 days.

The acute heart failure in an individual with a damaged myocardium brought about by the severe toxemia was a striking feature of the case.

These three cases are of the type in which the diagnosis of infectious mononucleosis would have been very difficult without the serologic test: only the later course might have suggested it.

Another form of diagnostic difficulties is encountered in cases that are indistinguishable from infectious mononucleosis clinically as well as hematologically and can be separated from it only by means of the serologic test, as the following case history will illustrate:

Lymphocytic angina with a low titer of heterophilic antibodies; test for infectious mononucleosis negative. A boy, aged eight years, was taken ill with a sore throat and fever. His cervical lymph nodes were markedly enlarged and tender. The blood smear on the fifth day of illness showed polymorphonuclear leukocytes 22 per cent, eosinophils one per cent, lymphocytes 69 per cent, abnormal lymphocytes one per cent, and monocytes seven per cent (77 per cent mononuclear cells). The blood picture was indistinguishable from that generally seen in the infectious mononucleosis and the clinical appearance was like that of mononucleosis; however, the agglutination test for mononucleosis was negative (1:7+). The child recovered rapidly.

In this case the low titer of agglutinins for sheep cells made it easy to exclude infectious mononucleosis. The decision is difficult in the third group, in which the clinical and hematologic picture suggests infectious mononucleosis and the titer of agglutinins for sheep cells is on the borderline (1:56 and 1:112). It is in these cases that the new differential test for infectious mononucleosis becomes invaluable. Mononucleosis is excluded if the absorption with the guinea pig kidney removes the agglutinins for sheep cells. If the absorption with beef erythrocytes were the only criterion, erroneous conclusions would result. Such errors are prevented by absorbing the serum with the guinea pig kidney and with beef erythrocytes. Two cases will serve as illustrations:

Lymphocytic angina with high (borderline) titers of heterophilic antibodies. A boy, age seven years, was admitted with a sore throat and markedly enlarged lymph nodes. The spleen was moderately enlarged. The tonsils were covered with a membrane. The temperature was 102.4° F. The child looked very ill. Smears from the throat showed large numbers of Vincent's organisms. Diphtheria bacilli were absent. Examination revealed 7,200 white blood cells with 57 per cent lymphocytes and one per cent of so-called abnormal lymphocytes. The titer of sheep agglutinins was 1:112, which is the so-called borderline titer. The differential test was negative for infectious mononucleosis. The infection in the pharynx dominated the picture during the further course. The infection extended into the ethmoid and maxillary sinuses. The spleen continued to be enlarged. Repeated blood counts showed normal numbers of white cells and from 50 to 61 mononuclear lymphocytes, with from one to three per cent of so-called abnormal lymphocytes. The child improved gradually and left the hospital three weeks after admission.

A girl, aged three years, took ill with a sore throat and fever. The lymph nodes, particularly those of the neck, were enlarged and tender, the spleen and liver were enlarged. The differential smear showed 21 per cent neutrophilic leukocytes, 72 per cent lymphocytes, five per cent abnormal lymphocytes, and two per cent monocytes. The test for heterophilic antibodies was 1:56+. The

differential test was negative for infectious mononucleosis.

In both preceding cases the absorption with ox cells removed completely the agglutinins for sheep cells. To class them on that basis as infectious mononucleosis would have been erroneous, as was demonstrated in the differential test by the complete removal of the sheep agglutinins by the guinea pig kidney.

Such cases, which are clinically and hematologically indistinguishable from infectious mononucleosis and are serologically negative as established by the agglutination test or by the differential test, are not infrequent. There is a need for the separation of infectious mononucleosis as a serologically homogenous group from the other group that is serologically negative. To avoid confusion it may be advisable to apply to the serologically negative group the old term "lymphocytic angina."

While in the foregoing cases with borderline titers the differential test helped to exclude infectious mononucleosis, in the fourth group of clinically and hematologically similar cases the differential test helps to establish the diagnosis of mononucleosis, as is illustrated by the following report:

Infectious mononucleosis with a low titer of heterophilic antibodies. A man, age 50, took ill in Florida in February, 1936. He had enlarged inguinal and axillary lymph nodes, fever, and general malaise. A blood count early in March showed 17,000 white cells with 80 per cent lymphocytes. A diagnosis of infectious mononucleosis was considered but was not made with certainty. The patient improved and returned to his home, where it was considered advisable to establish the nature of his illness in Florida. On March 31 he had 7,000 white cells with 49 per cent mononuclear cells. The titer of the heterophilic antibodies was 1:56+. That alone was not sufficient to diagnose mononucleosis. However, the differential test permitted a definite diagnosis of infectious mononucleosis. Its result was a complete absorption of the sheep agglutinins with beef cells and only partial absorption with the guinea pig kidney.

Another case was seen recently in a physician with a marked leukopenia. His condition was first diagnosed as agranulocytosis and only later did the test permit the diagnosis of infectious mononucleosis. The result of the test was accepted with considerable skepticism. Two months after the onset, the patient was worried over the possibility that he might have had agranulocytosis. The agglutination test for sheep cells was 1:56+. The differential test showed failure of the guinea pig kidney to remove the agglutinins and their removal by beef cells, indicating that the patient was recoving from infectious mononucleosis.

The results indicate the persistence of the quality of antibodies in infectious mononucleosis even at a time when they are quantitatively indistinguishable from the normal agglutinins for sheep cells. It is therefore necessary to employ the differential test in cases that suggest the possibility of mononucleosis even if the titer of the agglutinins is less than 1:112.

How long do the heterophilic antibodies persist in infectious mononucleosis? The disappearance of the abnormal lymphocytes and return of the mononuclear count to below the 50 per cent level can be referred to as the hematologic recovery that follows the clinical recovery and in turn is followed by the serologic recovery, the latest of the three. The first finding of the normal titer of less than 1:56 varies from 50 to 296 days (average 119 days) after the onset of illness in which it can be observed.

The fifth and final group of cases in which the value of the differential test becomes particularly apparent are those with a history of a recent injection of immune horse serum and especially those with serum disease. In such a case the question arises whether the elevated titer of the heterophilic antibodies is due to the infectious mononucleosis or to the serum injection. The following case belongs to that group:

Infectious mononucleosis with involvement of the central nervous system and complicated by serum disease. A high school girl, age 16 years, contracted a cold about November 20, 1935. When she was seen by her physician two weeks later she had a high fever, a sore throat, and enlarged and tender cervical lymph nodes. The physician was called two days later and found the girl unconscious and in convulsions. The patient was admitted to the hospital, where the cerebrospinal fluid was found clear, with 18 cells per cubic millimeter. Antimeningococcus serum was given. The patient continued to be very restless and unconscious. On the third day after admission she became conscious. An ulcerative and membranous pharyngitis set in at that time. The white blood count showed on admission 8,500 cells, with

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60 per cent polymorphonuclear leukocytes and 40 per cent lymphocytes. In the course of the next few days the blood showed 54 per cent and later 61 per cent mononuclear cells, with two per cent of so-called abnormal lymphocytes. Four days later, the patient developed serum disease. A few weeks later when the encephalitic symptoms had subsided, the blood examination suggested the possibility of infectious mononucleosis. December 27, the test was strongly positive (1:896). The interpretation of the test was complicated by the history of recent serum disease. The high titer of the agglutinins for sheep cells could have been due to serum disease. The differential test showed complete absorption of the sheep agglutinins by beef cells and only partial removal by the guinea pig kidney and established the diagnosis of infectious mononucleosis. The patient was followed hematologically and serologically for 135 days. The complicating involvement of the central nervous system and the absence of an elevated mononuclear count in the beginning of the disease are notable features.

SUMMARY

The test for heterophilic antibodies is of confirmatory diagnostic value in cases of infectious mononucleosis with typical clinical and hematologic features.

It is of a deciding diagnostic importance (a) for the early recognition of cases that show unusual hematologic signs and clinical symptoms, some of which are due to complicating factors, and (b) for the exclusion from the group of infectious mononucleosis of cases that are otherwise clinically and hematologically indistinguishable from it.

The differential test for infectious mononucleosis is of deciding diagnostic value for (a) the exclusion of cases that are clinically and hematologically indistinguishable from the infectious mononucleosis and that have a so-called borderline titer of heterophilic antibodies (1:56 or 1:112) and (b) the recognition of late casts of infectious mononucleosis with a relatively low titer of cases that are complicated by a recent therapeutic injection of horse immune serum or by serum disease.

Or, to state it another way, the Paul-Bunnell test for infectious mononucleosis is a *heterophilic antibody reaction*, based on the empirical observation that the serum of patients with infectious mononucleosis or with serum sickness will agglutinate *sheep* red cells; normal human serum will not do this. Mild agglutination may occur in cases of myelogenous leukemia and after horse serum injections. Agglutinations in dilutions greater than 1:32 indicate infectious mononucleosis or serum sickness.

If a D.D. of infectious mononucleosis and serum sickness arises, Davidsohn's agglutinin *absorption test should be applied.* In *serum sickness* the antisheep agglutinins are absorbed completely by both a guinea pig kidney emulsion and by beef red blood cells (boiled). In *infectious mononucleosis* they are absorbed only by beef red blood cells. In *normal* sera the few antisheep agglutinins which are present are absorbed completely only by guinea pig kidney emulsion.

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SO YOUR OB IS RH NEGATIVE?*

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The subject of the Rh factor and its relationship to obstetrics, erythroblastosis fetalis, and transfusions for any condition has been widely discussed in the literature. It is important, and the publication of articles in popular lay magazines has brought the subject to public attention so forcibly that no physician can ignore the subject no matter how much its importance may have been overemphasized.

This is a review of some of the literature with the hope of outlining some of the salient points that are especially important for the general practitioner.

For the sake of clarification it is best that the physician refresh his mind concerning blood typing. In 1901 Landsteiner described iso-agglutination in man and recognized a congenital difference between the agglutinogens or antigens found in the red cells and the agglutinins or antibodies found in the serum. He and his students worked out the four blood types which are hereditary under mendelian law.

Transfusion, because of the dilution of the donor's blood, is essentially putting donor's cells in recipient's serum, and so long as cells in serum cross match the transfusion may be safely made, if iso-immunization is disregarded. For that reason we have come to know type O as universal donor (the red cells contain no antigen) and type AB as universal recipient (the serum contains no agglutinin).

There are other factors to consider, however, in giving a transfusion. For a long time it has been noticed that in spite of cross matching some patients get reactions following transfusion. Many of these have perhaps been due to the recipient being Rh negative while the donor was Rh positive.

In 1940 Landsteiner and Wiener injected Macacus Rhesus monkey blood into rabbits and produced agglutinins in the rabbits that clumped the red cells of the monkey. They also tested the rabbit serum on human cells and found that it clumped the red cells of 85 per cent of human blood. Fifteen per cent of human bloods were not affected. They termed the substance that was in the cells of the 85 per cent that reacted to produce clumping the Rh factor. The 15 per cent that do not contain this agglutinogen in their red blood cells do not clump with the Rh agglutinin and they have what is known as Rh negative blood. Either Rh negative or Rh positive bloods may be of any blood group.

I will not go into the laboratory procedure for testing blood for the Rh factor. It is sufficient to note that a donor may be compatible on cross match with the recipient in vitro and yet if a Rh positive donor gives blood to a Rh negative recipient a reaction may occur. The reaction of the first transfusion may not be dangerous, but due to the stimulation of the Rh positive agglutinogen on the Rh negative recipient, she may develop sufficient agglutinins or antibodies that a subsequent transfusion may prove fatal.

In the Rh negative mother the stimulation that a first transfusion brings about in any other patient is theoretically brought about when fetal blood gains access to the mother's circulation through the placenta. The Rh factor is apparently inherited by mendelian law, and a Rh negative mother bearing the child of a Rh positive father may have a child that is either Rh negative or Rh positive. If the child is Rh negative nothing happens, but if the child is Rh positive and some of its cells gain access to the maternal circulation, the mother will develop antibodies which upon transfusion with Rh positive blood may cause her death just as readily as if the antibodies had been produced as the result of a prior transfusion with Rh positive blood. Rh positive blood injected into any Rh negative individual at any time causes these anti Rh antibodies to develop regardless of

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blood group, and the common procedure of giving intramuscular blood to infants may likewise produce this iso-immunization that later on in life may produce a fatal reaction.

It is now accepted that many hemolytic reactions occurring during pregnancy or postpartum periods are due to the development of Rh antibodies in Rh negative women who are carrying or have recently given birth to Rh positive children.

Young and Kariher have reported cases with intervals of eight and 16 years respectively following the birth of children with hemolytic disease of the newborn and a hemolytic reaction following the first transfusion. However, anti Rh agglutinins, as demonstrated by in vitro tests, usually disappear from the blood of Rh negative mothers in from six months to two years. The immunization produced undoubtedly persists but laboratory tests do not reveal it as a hemolytic transfusion reaction does.

Various conditions of the stillborn or newborn are thought in about 90 per cent of cases to be due to a Rh negative mother carrying a Rh positive fetus. The mechanism is thought to be as follows: Red cells from the fetus pass through the placenta into the maternal circulation. Iso-immunization occurs in the mother and the anti Rh agglutinins return to the fetal circulation producing blood destruction and the disease entity of erythroblastosis fetalis and possibly some other conditions, not so well proven. Usually a Rh negative mother will not lose her first child that is Rh positive because she does not develop sufficient antibodies, but if she has had a prior transfusion of Rh positive blood she may lose the first one of erythroblastosis fetalis. She may also have a subsequent Rh negative child that is normal.

Now bearing the above in mind, what criteria should the physician follow in testing obstetrical cases for the Rh factor? Is it necessary to test each and every mother for the Rh factor?

If in the general population 87 per cent are Rh positive and 13 per cent are Rh negative, then 5.6 per cent of matings will have a Rh positive father and Rh negative mother, the necessary condition for the production of an erythroblastosis fetalis. However, it is reported that only one out of 438 deliveries yields such an infant. This can be explained by other factors not being satisfied, such as penetration of the placenta by fetal red cells or lack of ready response in production of agglutinins by the mother.

In the overall population it is estimated that one in seven is Rh negative, and one in 50 of these develops a high anti Rh titer, so that only one in 350 will be gravely endangered by the Rh factor. Actual fatal titer is probably higher, but if none were tested, the one with the high titer might be some physician's first case. The danger to the mother is not in having a baby but that she may require a transfusion following delivery. She may have an erythroblastotic infant and still not require any blood. The same cannot be said for the infant for it will need blood, Rh negative blood, once the diagnosis of erythroblastosis is made.

It is highly desirable that every expectant mother be tested for the Rh factor, but if that is not being done for any reason, then at least the physician should elicit information on the first prenatal visit that would warn him that a Rh test is indicated. The mother should be tested:

(a) When there is a history of a previous transfusion or intramuscular blood or a transfusion is necessary during the present pregnancy.

(b) When there is a history of abortion, miscarriage, or stillbirth, unless the cause is obvious.

(c) When there has been a previous baby with erythroblastosis fetalis.

Asking these questions may not pick up every case but it will certainly be of immense help to the general practitioner in determining those that are most likely to give him trouble, and thus he can be forewarned and make a more leisurely decision as to his course of action.

When it has been determined that an expectant mother is Rh negative, what course of action should be followed? Obviously, if the physician is in a locality of sufficient size he will have blood donor lists or blood banks available, most of which now carry lists of their Rh negative donors of various types. It is probably best to have available a type O Rh negative donor as then the needs of both mother and infant have been anticipated. If a compatible donor is not available locally, the needs of the mother may be met with plasma. In some cases of severe blood loss in the mother, blood is the only thing that is lifesaving, and in such a case a compatible Rh negative donor is imperative. As for the infant, if it is Rh negative it should be as normal as any other infant, but if it is Rh positive, then there is a good chance that it will have erythroblastosis fetalis which may

show up at birth or any time in the first few weeks of life. Compatible Rh negative blood is the only hope for such a baby and must be given.

The physician with a Rh negative patient who anticipates delivery in the small locality without a large blood donor list containing Rh negative type O donors will have to acquaint the husband of his patient with the facts of the case without stressing or minimizing the dangers. Distance, time of travel to large centers, and many individual factors enter into the decision made by a small community practitioner. But the potentialities of these cases must be borne in mind in making the decision.

COMMENT

1. The physician should know something of blood groups, iso-immunization, and the Rh factor.

2. He should test every expectant mother for the Rh factor, or in lieu of the test, he should take sufficient history on Ob cases to identify those likely to be Rh negative and to be tested.

3. He should anticipate maternal transfusion and transfusion of the newborn and make suitable preparation by obtaining compatible Rh negative blood.

4. He should be particularly careful not to sensitize Rh negative women of childbearing or younger age by giving a transfusion of Rh positive blood.

5. He would do well to substitute vitamin K for intramuscular blood injection in the newborn.

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EPIDEMIC DIARRHEA OF THE NEWBORN*

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Only within the last decade has the medical profession become interested enough to investigate the cause of this alarming condition. It is a tragic thing to send a woman home without her baby after delivery, the infant having died in the hospital as a result of epidemic diarrhea. It is incumbent upon us as physicians to try and prevent such outbreaks and control them when they occur. This is a contagious disease. In the State of Michigan the Regulation for Control of Communicable Diseases states that all outbreaks of epidemic diarrhea in the newborn must be reported, and investigated by a full-time health department or by the Michigan Department of Health. The mortality rate is high; reported averages have been as high as 43 per cent.

Sometimes the attending physician may have some difficulty in making a diagnosis of epidemic diarrhea because the onset is so insidious. Before this diagnosis is entertained, the other infants in the nursery may have been exposed. Normally the character and number of stools in the immediate neonatal period vary. There is a tendency for loose, frequent stools in the transitional stage which may be due to irritation of the gastrointestinal tract by introduction of oral feedings and by the establishment of bacterial flora. Overfeeding, improper formulae, drugs, laxatives, and foods taken by the lactating mother may cause an alteration in the bowel habit in the nursing newborn. Diarrhea may be the result of some parenteral infection, such as rhinitis, otitis media, bronchitis, etc. All these causes must be considered before one can definitely be certain he is dealing with a case of epidemic diarrhea of the newborn, but I think that all diarrheas in this period should be considered as epidemic diarrhea until proven otherwise, and all necessary precautions taken to protect the others in the nursery.

Epidemic diarrhea of the newborn affects the newborn under one month of age, usually

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before the fourteenth day of life. It is contracted in the nursery and appears about the fourth to eighth day after delivery. Infants 24 hours old have presented the typical symptoms and infants over ten days old have become ill at home, having been normal while in the nursery. It is not a respecter of hospitals, sex, color, or the financial status of parents. It attacks normal infants, but prematures and those with physical defects seem to contract the disease much earlier. Artificially fed babies are more prone to the disease than are breast fed or partially breast fed newborns. It would seem that perhaps these infants derive some beneficial effect from the mother's milk. One author reported that deaths that did occur were in those completely artificially fed. Outbreaks have occurred in hospitals in widely scattered parts of the United States, Canada, England, and France. It is most commonly noted in the temperate zone and it is slightly more prevalent in the spring and summer months.

The disease apparently begins abruptly, but one frequently notes that for a day or two before the acute symptoms begin there is a listlessness, drowsiness, a lessened desire for food, and a standstill or slight weight loss. The invasion is characterized by an abrupt loss of weight, marked dehydration, and occurrence of diarrhea. There appears to be a toxemia present and some degree of shock. Acidosis is almost always present, some of the infants showing the typical symptoms of hyperpnea and cherry-red lips; but most of them do not, even though they may be in severe acidosis. Anderson states that the carbon dioxide combining power should be determined on all cases and watched closely, because even after correction by proper therapeutic measures the infant slips into acidosis again within 24 hours. There is a greyish color to the skin, the mucous membrane is dry, and if dehydration is marked the tissue turgor of the skin is lost. In the severe form there is almost always early abdominal distension. The stools are yellowish in color, sometimes brownish or greenish, frequent, and watery. There is no pus, no blood, no mucus in them. In long extended cases the stools may become few in number and may completely disappear, and still the infant go on to death. This fact lends weight to the assumption that the diarrhea may be only a local manifestation of a systemic disease. The fever is usually slight — 100 to 101 degrees by rectum. The higher temperature elevations represent the presence of a complication or a diarrhea of different etiology. The course is rapid — it may terminate fatally in two or three days, but in some instances may last two or three weeks. The average duration is eight or nine days. The fatal cases represent a tragic picture; in spite of all treatment the toxemia is progressive and one stands by and watches the infant die. Complications are frequent.

It has become more and more apparent as reports are published in the literature that the etiologic agent is a virus. Many organisms have been cultured from the stools of these sick infants and the authors are not too certain that these organisms are the offending agent. Some feel that perhaps these are secondary invaders. Organisms incriminated have been beta hemolytic Streptococcus, hemolytic Staphylococcus, bacillus of Flexner, Bacillus mucosus capsulatus, Streptococcus viridans, Salmonella, and many more. Buddingh and Dodd report a series of cases which present a herpetic stomatitis and diarrhea in infants under six months. It is caused by a filtrable virus which is highly contagious and can be transmitted by carriers. These cases have also occurred in newborn babies. Light and Hode report a series of cases of diarrhea in the newborn which was caused by a filtrable virus and it also caused a diarrhea in newborn calves.

Very little has been written about the pathology of this disease. On sigmoidoscopic examination one finds hyperemia, edema, and some superficial erosion of the mucous membrane. Craig found some hyperemia and swelling of the mucosa along with involvement of Peyer's patches and mesenteric nodes. Complications such as otitis media, mastoiditis, pneumonia, pericarditis, and peritonitis have all been found at postmortem examination.

We have four things to combat in this disease: (1) toxemia, (2) dehydration, (3) acidosis, (4) diarrhea.

Wolarsky and Felsen used 25 cc. of pooled plasma intramuscularly daily for three days along with the use of the sulfonamides and had good results. They used the plasma also as a prophylactic measure in those exposed and found that it afforded protection against the disease. There is a report to be published in a future issue of the Journal of Pediatrics entitled "Therapeutic Measures Including Prophylactic and Therapeutic Use of Gamma Globulin." It will be interesting to note the results obtained. The use of the sulfonamide drugs has a big play in many of the reports with apparently good results. I doubt that

these drugs are as effective as some of the reports suggest, especially when one considers this a virus disease.

The use of interstitial and intravenous fluids is indicated both for the dehydration and acidosis. One can use normal saline, five per cent glucose in distilled water or normal saline, sixth molar sodium lactate solution either by the intravenous or interstitial route. Five per cent sodium bicarbonate solution can be used intravenously to overcome a severe acidosis. Blood transfusion can be used, but only after the dehydration is treated first and under control. Interstitial fluids are given in the amount of 15 cc. per pound of body weight; intravenous fluids in the amount of 10 cc. per pound; and blood, if given, in the amount of eight cc. per pound. A formula that is easy to remember which determines the amount of sodium bicarbonate to be used is as follows:

Number grams of sodium bicarbonate is equal to carbon dioxide deficiency (difference between the normal carbon dioxide of 65 and that of the patient) times weight in kilograms times 0.026. This should be given in a five per cent solution.

In treating the diarrhea, we give the intestinal tract a rest for 24 hours. We then start cautiously with perhaps a boiled skimmed milk formula, a protein milk formula, or a lactic acid protein milk formula. We gradually increase the caloric intake as the infant improves and can tolerate the increased load on the gastro-intestinal tract.

As soon as an infant is suspected of having the disease, it should be isolated by being put in a contaminated nursery under care of nurses who do not come in contact with the other newborn babies. The nursery from where the ill infant came should be closed to new admissions. Having discussed the symptoms, the cause and the treatment, it is important that we consider prophylactic measures.

1. Sterile technique in handling of newborn babies in the nursery is important. Everyone who comes in contact with these babies should wear a gown and a mask and should wash his hands between babies. This includes the attending physician.

2. Persons with colds or diarrhea should not handle these babies.

3. Children under 16 years of age should not be allowed on the obstetrical floor.

4. Visitors with upper respiratory infections should not be allowed to visit the mothers.

5. The mother should wear a mask when the infant is in her room.

6. There should be a separate nursery for premature babies under the care of nurses not handling the other babies.

7. The formula room should be a separate unit under the supervision of a trained nurse. The formulae should be made under sterile conditions.

8. If at all possible the baby should be placed upon the breast.

9. The use of a tracheal catheter is much safer than the finger for removal of mucus from the infant's mouth.

In closing I wish to emphasive these nine points with special attention to breast feeding. We still do not know the mode of transmission and, therefore, do not know the method of combating this disease, but I feel if we keep these suggestions before us at all times we can cut down the incidence of epidemic diarrhea of the newborn.

ADDENDUM: Since this article has gone to press, Anderson found that the use of gamma globulin in this disease is of no value either prophylactically or therapeutically.

DISCUSSION

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At the annual meeting of the American Medical Association in 1937, Frant and Abramson[1] presented their experiences with infantile epidemic diarrhea before the Section of Pediatrics. At this time these authors expressed the opinion that they were dealing with a new clinical entity of unknown etiology, but with clinical and epidemiologic characteristics which differentiated it from other diarrheal diseases of infancy. At this time the syndrome was descriptively designated as *epidemic diarrhea of the newborn.* The clinical course was described as having several merging phases: a period of incubation, a stage of invasion, a toxic stage, and a terminal stage of complications and death. The lack of evidence of parenteral infection and the early absence of fever were noted. Since then many similar outbreaks have been reported. However, the etiology still remains obscure.

If outbreaks of this serious disease are to be avoided, the physical set-up and the techniques of the newborn services must be constantly supervised. Surgical asepsis is required in handling and preparing everything which comes in contact with the infant's mouth. Even when an effort is made in this

direction, errors may occur. For this reason it is believed that the incidence of the disease can be decreased by shortening the hospital stay of the normal infant to three or four days, instead of the customary ten to fourteen days. In this way the chance of contact with the inciting agent is materially reduced. In a small epidemic reported by Anderson and Nelson[2] the average age of the infants at the time of onset of the diarrhea was 6.4 days. This method would reduce the over crowding of the nurseries and give the hospital facilities for handling more cases. At home, where the infant is subected to less regimentation, his chances of being breast fed will be increased.

Should an epidemic of this type of diarrhea occur in a hospital, it is imperative to isolate the infected cases and to keep those exposed separated and under observation for early symptoms and signs of infection.

The principles of treatment of the ill infant have been discussed. The correction of the existing acidosis and the maintenance of an adequate fluid balance are extremely important. The correction of the acidotic state can best be accomplished by the use of one-sixth molar sodium lactate solution in calculated quantities. It has the advantage over a solution of sodium bicarbonate in that it can be given both intravenously and subcutaneously. Amino acids in the form of Amigen should be given orally and parenterally to correct the hypoproteinemia incident to inadequate protein intake and poor assimilation. Sulfonamides and penicillin are indicated in treating any parenteral infection that may arise.

Anderson and Nelson favor the discontinuance of the milk formula and the feeding of glucose water in Ringer's solution during the phase of severe diarrhea. When feedings are resumed, a formula consisting of glucose, apple powder, skimmed milks, and Ringer's solution is given. This formula is supplemented by giving two ounces of sterile water containing 25 milligrams of ascorbic acid and 0.5 milligram of thiamine chloride between feedings. High, Anderson, and Nelson[3] have recently suggested the administration of vitamin K in order to prevent any bleeding tendency caused by hypothrombinemia.

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Walker Morledge, M.D., Associate Professor of Medicine, and *Bela Halpert, M.D.*, Director of Laboratories, conducted the Clinical Pathological Conference at the University of Oklahoma School of Medicine which is reported in this issue.

Dr. Morledge, a graduate of the Western Reserve University School of Medicine, Cleveland, Ohio, in 1919, engages in private practice with offices in the Osler Building, Oklahoma City, in addition to his position on the teaching staff at the School. He is a past president of the Oklahoma County Medical Society, a member of the Oklahoma State Medical Association and the American Medical Association.

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CLINICAL PATHOLOGIC CONFERENCE

University of Oklahoma School of Medicine

Presented by the Departments of Pathology and Medicine

WALKER MORLEDGE, M.D. AND BELA HALPERT, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HALPERT: Syphilis may mimic many diseases. A patient known to have syphilis may come under observation for a variety of reasons which may or may not be related to syphilis. If the disease is terminal, one must consider the numerous ways in which syphilis may cause death and yet consider the possibility that death is not related to syphilis.

Doctor Morledge will present and analyze the clinical aspects of this case. He did not see this patient nor has he received information other than that which has been furnished to each of you.

PROTOCOL

Patient: M. R., Negro female, age 47; admitted February 27, 1946; died March 14, 1946.

Chief Complaint: Shortness of breath, substernal pain, cough, and pedal edema.

Present Illness: The patient was essentially well until approximately four years ago when she developed a "goiter." This was accompanied by moderate weakness and dyspnea. Her physician prescribed Lugol's solution, 20 drops three times a day. She continued this medication for over a year and was considerably improved. She remained fairly well from that time until January, 1946, when she again noticed dyspnea. This has increased and there has been a progressive swelling of the feet, hands, and abdomen. In addition there has been an increasing sensation of substernal pressure. She has taken small tablets sublingually without relief. The patient states that her "goiter" disappeared several months ago.

Past and Family History: The patient denies having had any venereal disease or antiluetic therapy. Other history is noncontributory.

Physical Examination: On examination the patient appeared well developed and somewhat obese. Her temperature was normal. She was propped up in bed; her respirations were short and gasping in type. Eyes, ears, nose and throat were not remarkable. The thyroid gland was not palpable. A few scattered moist rales were heard over both lung fields. The breasts were large. A loud blowing systolic and diastolic murmur was heard over all valve areas, best at the mitral area. It was transmitted to the neck and the axilla. The P. M. I was 14 cm. from the midsternal line in the fourth interspace extending to the anterior axillary line. The blood pressure was 150/40/0, the heart rate 80 and irregular. Capillary pulsation was evident in the nail beds. The abdomen was obese. The liver was barely palpable and tender. There was a questionable fluid wave, 4+ pitting edema of the lower extremities and 2+ edema of the arms. The tendon reflexes were physiologic.

Laboratory Data: On February 28, 1946, a catheterized urine specimen was clear, dark green, and acid, with a specific gravity of 1.010; there was 3+ albumin, no glucose, and ten white blood cells per high power field. The hemoglobin was 9.5 Gm., the red blood cell count 3.65 million, and the white blood cell count 12,700 with 82 per cent neutrophils and 18 per cent lymphocytes. On March 5, 1946, the Mazzini was 4+; the Kolmer Wassermann was later reported 4+. No acid-fast bacilli were found in the sputum. An E. C. G. revealed partial heart block with dropped beats.

Clinical Course: The patient was digitalized and there was a marked toxic reaction to the digitalis. She also received oxygen by nasal catheter, salyrgan, and ammonium

chloride. Her fluid intake was limited to 1000 cc. per day. Morphine and codeine were used to relieve pain. On March 4, 1946, she coughed up bright red blood on several occasions. Her condition deteriorated rapidly and she complained of severe chest pain. On March 6, 1946, there was a pleural friction rub heard over the right anterior chest wall. This corresponded to an area of increased density noted on February 28, 1946, in an x-ray of the chest. There was little change until March 14, 1946, when she suddenly fell over from her sitting position and was dead on the intern's arrival. During this period of hospitalization the patient was afebrile.

CLINICAL DIAGNOSIS

DR. MORLEDGE: Upon reading this history, it is evident that the patient in question died of congestive heart failure. We do not know the exact duration of her illness although she apparently became ill approximately six to eight weeks before admission to the hospital. Her initial complaint was shortness of breath. We do not know the history prior to that time except that she was said to have had a "goiter" about four years ago. We do not know whether she had had pain in the chest or fever with this present respiratory difficulty. We wonder also, did she cough; was she at bed rest? As her disease progressed she began to complain of substernal oppression, swelling of the hands and abdomen, but was not aware of swelling of the face. We have then two major objective findings to consider: dyspnea and edema. There are multiple causes for each of these. For instance, pneumonia is a common cause of dyspnea, but this patient had dyspnea too long for it to be attributed to an acute inflammatory process in the lungs. Then too, there is the edema to consider. The fact that this edema spared her face immediately suggests that it was not of nephritic origin. There was 3+ proteinuria, but we know that this can result from chronic passive congestion of the kidneys. There were no casts or R. B. C.'s in the urine. It seems quite clear that all of these signs and symptoms are the result of heart failure. Precisely what pathologic lesion exists in the heart and what is the etiology and the prognosis and the treatment? These questions now become of interest to us. Unless we know the nature of the lesion and its etiology, we cannot intelligently direct our treatment, nor can we determine the prognosis.

The patient had a 4+ Wassermann. She had also a heart which was considerably enlarged. The fact that both systolic and diastolic murmurs were heard over all valve areas indicates a considerable element of dilatation as well as hypertrophy. Stretching of the valvular orifices, incident to dilatation, is the probable basis for diastolic murmur. The blood pressure was 150 40. We wish that we could know what the blood pressure was during the preceding two years. It might have been that she suffered from hypertension. If this were the case, however, we would expect to have an elevation of both systolic and diastolic pressure.

Both syphilis and thyrotoxicosis may produce serious cardiac disease and in both conditions the heart will be enlarged. The fact that she had a high systolic and a very low diastolic pressure with an enlarged heart implies that she had aortic insufficiency. What is the etiology? Of course syphilis may produce such a lesion but then again so may rheumatic fever. It is said that she had a "goiter" about four years ago. Her history seems unreliable. Whether she actually had swelling of the neck is important. She was given Lugol's solution, 60 minims per day, with improvement. This is a very large dose for goiter. Is it possible that her benefit from this medication occurred because of an effect on syphilis? It seems that the major cardiac lesion was aortic insufficiency and this is the principal effect of so-called syphilitic heart disease. It is said that gummas may occur in the myocardium, but I have never seen such a case; syphilitic aortitis need not involve the heart itself. It will do so only if it involves the aortic valves or the coronary ostia. It would be better if we spoke about syphilitic aortitis rather than syphilitic heart disease. This patient may have had involvement of some of the coronary arteries; I do not know. I would like very much to know what the chest film showed. If it revealed an aortic aneurysm or diffuse dilatation of the ascending aorta that would greatly strengthen our diagnosis of syphilitic aortitis.

A patient with congestive heart failure frequently has an episode of acute pain in the chest. When this is associated with a pleural friction rub, an increase in dyspnea and hemoptysis, the diagnosis of pulmonic infarct is practically a certainty. Did she have a mural thrombus in the right atrium and discharge a portion of this as an effect of digitalis?

As precipitating causes of death we would have to consider: (a) massive pulmonary embolism, (b) cardiac infarction, (c) rup-

ture of an aortic aneurysm, and finally, (d) we must remember that patients with syphilitic aortic valvulitis are subject to sudden death as a direct result of this lesion.

ANATOMIC DIAGNOSIS

DR. HALPERT: Observations at necropsy verified Dr. Morledge's diagnosis. The most significant changes were in the heart. The heart was considerably dilated, measuring 16 cm. from base to apex and 13 cm. across the base. Its apex was rounded and made up principally of the left ventricle. It weighed 600 grams, about twice the normal. Each of the valve orifices was within the normal limits of size. This may seem difficult to reconcile with the clinical observations. We know, however, that in cases of this sort there is a *dynamic* dilatation affected by blood pressure, and that when the blood pressure becomes zero, this effect is no longer apparent. The aortic valve cusps were thickened, rolled, and shortened so that even though the orifice was of essentially normal circumference, 7.5 cm. (at death), the valvular changes prevented normal closure. The thoracic aorta also presented characteristic luetic changes. Its intimal surface was scarred and puckered with stellate and longitudinal ridges. There was moderate atherosclerosis in addition. Coronary ostia were not obstructed nor were the coronary arteries narrowed. This was to be expected since a heart which does not get adequate blood supply cannot hypertrophy to this extent.

The thyroid gland was of essentially normal size and appearance. There was no morphologic basis to explain the "goiter" which the patient described.

The lungs were almost double the usual weight, but there was little pneumonia. This increase in weight was largely the result of chronic passive congestion and the hemorrhagic infarcts — one in each lower lobe. Fibrinous adhesions overlying the infarct in the right lower lobe explained the chest pain and pleural friction rub heard over that area. There was approximately 500 cc. of blood-stained serous fluid in this cavity.

One possible explanation of these pulmonic infarcts is very unusual and I shall illustrate it with the microscopic projector. A portion of pulmonary artery included in this section reveals an actual gumma in its wall. Since we found no thrombi in leg veins or in the right atrium that might have given rise to emboli, it appears as though the infarcts may have been a result of syphilitic (gummatous) involvement of pulmonary arteries.

The peritoneal cavity contained approximately 300 cc. of serous fluid. It was not remarkable save that the liver extended 6 cm. below the costal margin in the right midclavicular line. The liver was moderately enlarged (1700 grams), the result of rather marked chronic passive congestion. Other abdominal viscera also presented evidence of chronic congestion.

DISCUSSION

QUESTION: Did you find a morphologic basis for the heart block?

DR. HALPERT: No. Frequently no morphologic basis is evident for this functional change. Occasionally there may be a gumma, calcified spur, or other lesion which involves the bundle of His to produce heart block — such was not the case here.

QUESTION: What was the cause of sudden death?

DR HALPERT: I suspect that death in this case was the result of sudden heart failure on a functional basis, i.e., either a systole or ventricular fibrillation.

Have you made your reservation for the Annual Session of the Association, May 14 to 16?

There is still time. Write the Executive Secretary, Tulsa County Medical Society, Medical Arts Building, Tulsa, Oklahoma.



IN CONSTIPATION OF PREGNANCY . . .

"SMOOTHAGE" MANAGEMENT

Pressure on the pelvic bowel by the enlarged uterus and impaired abdominal muscle tone account, to a great extent, for the high incidence of constipation in pregnancy.

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ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

SEARLE

RESEARCH
IN THE SERVICE OF MEDICINE

President's Page

Custom rather dictates that at the time of annual meetings and other important occasions of organizations and businesses a plea is made for attendance by the membership.

America and the individual American have developed a habit which now seems a natural and routine way of life in taking advantage of opportunities that present themselves to give and receive from meetings, conventions, and just local gatherings designed to improve the stature and knowledge of all who attend. There is always a tendency to wait until the last minute to make decisions and arrangements for attending, and too often the final decision is to the effect that the individual has waited too long to make the necessary arrangements and he sells himself on the idea that it would be better not to attend. This is a sad commentary on physicians who should make every effort to keep themselves abreast of the times, particularly when there is an opportunity to hear a three-day scientific program such as has been prepared for the Annual Meeting to be held in Tulsa May 14, 15, and 16.

It is still not too late to make your plans to attend.

It was Teddy Roosevelt who said, "Every man owes some of his time in the interest of the profession to which he belongs." Think it over.

L. C. Kuykendall

President.



ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry

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PROGRAM

FIFTY-FOURTH ANNUAL SESSION
OKLAHOMA STATE MEDICAL ASSOCIATION

TULSA, MAY 14, 15, AND 16, 1947

GREETINGS FROM THE TULSA COUNTY MEDICAL SOCIETY

It is always a very genuine pleasure for the physicians of Tulsa County to be hosts to the members of the Oklahoma State Medical Association at the annual meeting of that organization. The 1947 convention, to be held in Tulsa on May 14-16, is an event of special significance to us for it is the first post-war meeting of the Association in our city. In the three years since our last Tulsa convention in 1944, we have gone from war to peace. Hundreds of old friends who were serving in the Armed Forces of the United States have been welcomed back to private practice. We have begun anew many valuable projects for the advancement of scientific medicine in the State of Oklahoma. With this new spirit, we are anxious that the 1947 annual meeting be one of maximum educational and entertainment value to each visiting doctor. A splendid program has been arranged with a number of social features.

The Tulsa County Medical Society most cordially invites you and your wives to be guests at an informal party immediately preceding the President's Annual Dinner Dance on the evening of Friday, May 16.

The Ladies Auxiliary has prepared a program of interest to wives and daughters, who are always a special part of the annual meeting.

You are invited to make full use of Tulsa's famous brand of Southern hospitality, and each of us will be looking forward to seeing you in Tulsa in May.

Yours very truly,
E. O. JOHNSON, M.D., President
Tulsa County Medical Society.

GENERAL INFORMATION

HEADQUARTERS

Mayo Hotel, Tulsa

ROOM RESERVATIONS

Adequate housing facilities at the leading hotels have been arranged. However, it will not be possible to house everyone in the Mayo Hotel. It is suggested that all those planning on attending the Annual Meeting make their hotel reservations through Mr. Jack Spears, Executive Secretary, Tulsa County Medical Association, Medical Arts Building, Tulsa, at the earliest possible date.

In making your reservations, please be certain that you advise the date of your arrival, the approximate time you expect to register into the Hotel, and the date you will leave. Room reservations are canceled at 7:00 P.M. unless a later arrival time is specified and guaranteed.

REGISTRATION

16th Floor — Mayo Hotel

Registration will be in front of the elevators on the 16th floor of the Mayo Hotel. All physicians except those from outside the state, visiting guests, and those on military assignment, *must present membership cards for* 1947 *before registering.* Dues and 1946 assessments will not be accepted at the Registration Desk except from County Secretaries.

Registration will be from 10:00 A.M. to 4:00 P.M. on Tuesday, May 13, and from 8:00 A.M. until 6:00 P.M. on Wednesday, May 14; Thursday, May 15; and Friday, May 16.

SECTION MEETINGS

All Section Meetings will be held on Wednesday, Thursday, and Friday, May 14, 15, and 16, beginning at 9:00 A.M. The Section on Medicine will meet in the Ivory Room on the Mezzanine of the Mayo. The Section on Surgery will meet in the Crystal Ballroom on the 16th Floor.

GENERAL SESSIONS

The General Sessions will be held at 2:00 P.M. on Wednesday, May 14; Thursday, May 15; and Friday, May 16 in the Crystal Ballroom, 16th Floor, Mayo Hotel.

SYMPOSIUM

On Thursday evening at 8:00 P.M. in the Crystal Ballroom there will be a Symposium on "Modern Therapy" in which guest speakers from all specialties will participate.

HOUSE OF DELEGATES

The House of Delegates will meet on Tuesday, May 13, the day preceding the opening of the Scientific Program, in order that the business may be completed in time for the Delegates to be able to enjoy the Scientific Program. All meetings of the House of Delegates will be in the Ivory Room, Mezzanine Floor. The first meeting will be held at 2:00 P.M. and the second at 8:00 P.M.

COUNCIL

The Council will convene upon call by the President.

TECHNICAL EXHIBITS

The exhibits will be displayed on the 16th Floor, Mayo Hotel.

OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION



Paul B. Champlin, M.D., Enid
President-Elect



L. C. Kuyrkendall, M.D., McAlester
President



Lewis J. Moorman, M.D., Okla. City
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Mrs. Jesse D. Hamer
Phoenix, Arizona
Pres. A.M.A. Woman's Auxiliary



Mrs. Wiley R. Buffington
New Orleans, La.
Pres. Southern Med. Assoc. Auxiliary

CONVENTION PROGRAM

Tuesday, May 13, 1947

2:00 P.M. Registration Mezzanine, Mayo Hotel

Wednesday, May 14, 1947

10:30 A.M. Board Meeting YWCA Building

1:30 P.M. Business Meeting YWCA Building

Mrs. Jesse D. Hamer, Phoenix, Ariz., Pres. A.M.A. Woman's Auxiliary, "Progress of Auxiliary."

Mrs. Wiley R. Buffington, New Orleans, La., Pres. Southern Med. Assoc. Woman's Auxiliary, "Aims and Objectives of Southern Med. Assoc. Auxiliary."

Mrs. Joseph W. Kelso, Oklahoma City, First Vice-President of Southern Med. Assoc. Woman's Auxiliary, "Report on Southern Convention."

9:30 A.M. Registration Mezzanine, Mayo Hotel

Thursday, May 15, 1947

12:30 P.M. Luncheon and Style Show.....The Tulsa Club
All visiting ladies invited.

9:30 A.M. Registration Mezzanine, Mayo Hotel

GUEST SPEAKERS



JAMES W. WATTS, M.D., Washington, D. C. **Neurology.** Neuro Surgeon at Gallinger Municipal Hospital and George Washington University Hospital. Consultant in Neurosurgery at Walter Reed General Hospital and Veterans Hospital. Clinical professor of neuro-surgery, George Washington University.



NICHOLSON J. EASTMAN, M.D., Baltimore, Maryland. **Obstetrics.** Obstetrician in Chief, The Johns Hopkins Hospital.

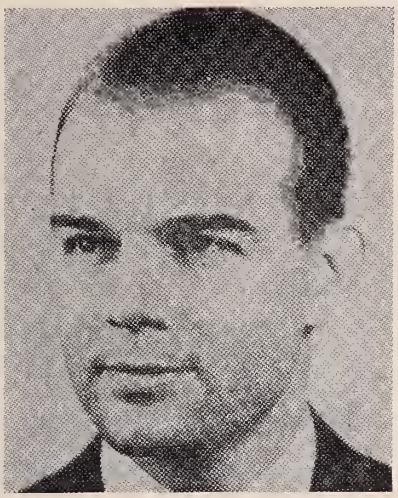


SAMUEL F. MARSHALL, M.D., Boston, Mass. **Surgery.** Associate in Surgery, Lahey Clinic with principal interest in gastric surgery.



TINSLEY R. HARRISON, M.D., Dallas, Texas. **Internal Medicine.** Professor of Internal Medicine Southwestern Medical College. Consultant in Internal Medicine, Baylor University Hospital. Physician-in-Chief, Parkland Hospital, Dallas.

GUEST SPEAKERS



JAMES G. HUGHES, M.D., Memphis, Tenn. **Pediatrics.** Associate Professor of Pediatrics at University of Tennessee College of Medicine.



BEDFORD SHELMIRE, M.D., Dallas, Texas. **Dermatology.** Professor of Dermatology Southwestern Medical College. Chief of Staff, Department of Dermatology, Parkland Hospital and Texas Children's Hospital.



FRANCIS LEDERER, M.D., Chicago, Ill. **Otolaryngology.** Professor of Otolaryngology, University of Illinois College of Medicine. Director of Education, Illinois Eye and Ear Infirmary.



T. DUCKETT JONES, M.D., Boston, Mass. **Public Health.** Director of Research in Rheumatic Fever and Rheumatic Heart Disease, House of the Good Samaritan, Boston. Assistant Professor of Medicine, Harvard Medical School.

C. D. CREEVY, M.D., Minneapolis, Minn. **(We are sorry that a picture of Dr. Creevy is not available.) Urology.** Former Assistant Dean of University of Minnesota Medical School. Residency in Urology at Mayo Foundation in Rochester.

LIBRARY OF THE
COLLEGE OF PHYSICIANS

SCIENTIFIC PROGRAM

WEDNESDAY, MAY 14

SURGERY SECTION

CRYSTAL BALLROOM, 16TH FLOOR

Chairman: Everett Neff, M.D., Oklahoma City

9:00—"Treatment of Mastoiditis"—Harry Ford, M.D., Oklahoma City.
9:15—"Nasal Allergy"—H. F. Vandever, M.D., Enid.
9:30—"Osseous Complications of Rhinogenic Origin"—Francis Lederer, M.D., Chicago, Ill.
10:00—General Discussion.
10:20—"The Surgical Treatment of Peptic Ulcer With a Preliminary Report on Vagotomy"—L. J. Starry, M.D., Oklahoma City.
10:35—"Small Bowel Obstruction"—Evans E. Talley, M.D., Enid.
10:50—"Thiouracil in the Treatment of Hyper-thyroidism"—Bert F. Keltz, M.D., Oklahoma City.
11:05—"Gastric Carcinoma"—Samuel F. Marshall, M.D., Boston, Mass.
11:35—General Discussion.

MEDICINE SECTION

IVORY ROOM, MEZZANINE

Chairman: John Hackler, M.D., Oklahoma City

9:00—"A Review of the Management of Syphilis"—C. P. Bondurant, M.D., Oklahoma City.
9:15—"Common Fungus Infections"—A. Brooks Abshier, M.D., Oklahoma City.
9:30—"Adolescent Acne and Its General Management"—Onis Hazel, M.D., Oklahoma City.
9:45—"Facts About Poison Ivy"—Bedford Shelmire, M.D., Dallas, Texas.
10:15—General Discussion.
10:35—"Newer Concepts of Intestinal Function"—Turner Bynum, M.D., Oklahoma City.
10:50—"Diagnosis and Management of Peptic Ulcers"—Harry Daniels, M.D., Oklahoma City.
11:05—General Discussion.
11:15—"Quantitative Serologic Tests in Evaluation of Syphilotherapy"—F. R. Hassler, M.D., Oklahoma City; Catherine Harris, B.S., Oklahoma City.
11:30—"Chest X-Ray Survey Program in Oklahoma"—Richard M. Burke, M.D., Oklahoma City.
11:45—General Discussion.

GENERAL SESSION

CRYSTAL BALLROOM, 16TH FLOOR

Chairman: L. C. Kuyrkendall, M.D., McAlester

2:00—"Current Problems in Public Health"—John Hackler, M.D., Oklahoma City.
2:20—"Rheumatic Fever — A Community Health Problem"—T. Duckett Jones, M.D., Boston, Mass.
2:50—"Urology in General Practice"—D. W. Branham, M.D., Oklahoma City.
3:10—"Treatment of Prostatism"—C. D. Creevy, M.D., Minneapolis, Minnesota.
3:40—"Congenital Heart Disease"—Homer A. Ruprecht, M.D., Tulsa.
4:00—"Some Conditions Simulating Angina Pectoris"—Tinsley R. Harrison, M.D., Dallas, Texas.

THURSDAY, MAY 15

SURGERY SECTION

CRYSTAL BALLROOM, 16TH FLOOR

Chairman: E. N. Smith, M.D., Oklahoma City

9:00—"Management of Fibroids in Pregnancy"—E. O. Johnson, M.D., Tulsa.
9:15—"Obstetrical Anomalies in General Practice"—E. H. Shuller, M.D., McAlester.
9:30—"Extra Peritoneal Cesarean Section"—Charles Cunningham, M.D., Ardmore
9:45—"Diet in Pregnancy"—Nicholson J. Eastman, M.D., Baltimore, Maryland.
10:15—General Discussion.
10:35—"Renal Anomalies and Their Complications"—W. F. Lewis, M.D., Lawton.
10:50—"Treatment of Urinary Incontinence — Congenital and Acquired"—Basil A. Hayes, M.D., Oklahoma City.
11:05—"Leiomyosarcoma"—Joseph Fulcher, M.D., Tulsa.
11:20—"Significance of Hematuria"—C. D. Creevy, M.D., Minneapolis, Minnesota.
11:50—General Discussion.

MEDICINE SECTION

IVORY ROOM, MEZZANINE

Chairman: W. K. Ishmael, M.D., Oklahoma City

9:00—"The Parent in Pediatric Practice"—Harold J. Binder, M.D., Oklahoma City.
9:15—"Surgical Correction of Congenital Heart Disease"—J. Moore Campbell, M.D., Oklahoma City.
9:30—"The Electrolytes in Treatment"—Walter F. Sethney, M.D., Tulsa.
9:45—"Present Concepts of Tuberculosis in Childhood"—James Hughes, M.D., Memphis, Tenn.
10:15—General Discussion.
10:35—"The Treatment of Sub-Acute Bacterial Endocarditis"—Philip Schreck, M.D., Tulsa.
10:50—"Pericarditis Simulating Coronary Occlusion"—W. W. Rucks, Jr., M.D., Oklahoma City.
11:05—"The Diagnosis of Enteric Disease"—Emil E. Palik, M.D., Tulsa.
11:20—"The Management of Heat Stroke"—Tinsley R. Harrison, M.D., Dallas, Texas.
11:50—General Discussion.

GENERAL SESSION

CRYSTAL BALLROOM, 16TH FLOOR

Chairman: Paul B. Champlin, M.D., Enid

2:00—"Small Ophthalmological Problems in General Practice"—James P. Luton, M.D., Oklahoma City.
2:20—"Neoplastic Diseases of the Nasal Accessory Sinuses"—Francis Lederer, M.D., Chicago, Ill.

2:50—"Common Errors in Diagnosis of Syphilis"—Hervey A. Foerster, M.D., Oklahoma City.
3:10—"Treatment of Common Skin Diseases"—Bedford Shelmire, M.D., Dallas, Texas.
3:40—"Infections of the Hand"—Ray Lindsey, M.D., Pauls Valley.
4:00—"Carcinoma of the Breast"—Samuel F. Marshall, M.D., Boston, Mass.

SYMPOSIUM

8:00 P.M.—Subject: "Modern Therapy."
Moderator: Homer A. Ruprecht, M.D., Tulsa.
All Guest Speakers will participate.

FRIDAY, MAY 16

SURGERY SECTION

CRYSTAL BALLROOM, 16TH FLOOR

Chairman: C. G. Stuard, M.D., Tulsa

9:00—"Cataracts"—Charles H. Haralson, M.D., Tulsa.
9:15—"Present Day Management of Trachoma"—Fred Switzer, M.D., Hugo.
9:30—General Discussion.
9:45—"Curare in Surgical Anesthesia"—Hubert Doudna, M.D., Oklahoma City.
10:00—"Fractures of the Patella"—L. Stanley Sell, M.D., Oklahoma City.
10:15—General Discussion.
10:30—"Radiological Diagnosis of the Acute Surgical Abdomen"—Simon Pollock, M.D., Tulsa.
10:45—"Radiation Therapy for Shoulder Pain"—Walter E. Brown, M.D., Tulsa.
11:00—General Discussion.
11:15—"Pelvic Thrombophlebitis"—W. F. Thomas, M.D., Tulsa.
11:30—"Endometriosis"—Henry G. Bennett, M.D., Oklahoma City.
11:45—General Discussion.

MEDICINE SECTION

IVORY ROOM, MEZZANINE

Chairman: Jess Herrmann, M.D., Oklahoma City

9:00—"Spontaneous Subrachnoid Hemorrhage"—Arnold Ungerman, M.D., Tulsa.
9:15—"Curare and Electric Shock Therapy"—T. R. Turner, M.D., Tulsa.
9:30—"Neuro-Endocrine Relationships"—Henry H. Turner, M.D., Oklahoma City.
9:45—"Psychosurgery — A Contribution to the Management"—James W. Watts, M.D., Washington, D. C.
10:15—General Discussion.
10:35—"Immunization"—J. R. Hinshaw, M.D., McAlester.
10:50—"Incidence of Intestinal Parasites in Southeastern Oklahoma"—O. R. Gregg, M.D., Hugo; Mary Jane McClintock, B.S., M.T.
11:05—"Treatment of Parasitic Infection Common in Oklahoma"—D. B. McMullen, D.Sc., Oklahoma City (By invitation).
11:20—"Rheumatic Fever — Clinical Aspects"—T. Duckett Jones, M.D., Boston, Mass.
11:50—General Discussion.

GENERAL SESSION

CRYSTAL BALLROOM, 16TH FLOOR

Chairman: Roy Emanuel, M.D., Chickasha

2:00—"Convulsions in Infants"—Herschel J. Rubin, M.D., Tulsa.
2:20—"The Management of Acute Nephritis in Children"—James G. Hughes, M.D., Memphis, Tenn.
2:50—"Hemorrhagic Emergencies"—E. N. Smith, M.D., Oklahoma City.
3:10—"Episiotomy"—Nicholson J. Eastman, M.D., Baltimore, Maryland.
3:40—"The Fatigue Mental States — Symptoms and Diagnosis"—Chas. R. Rayburn, M.D., Norman.
4:00—"Schizophrenia — Indications for Psychosurgery"—James W. Watts, M.D., Washington, D. C.

SOCIAL EVENTS

Wednesday — May 14

7:00 P.M.—Dinner, Topaz Room, Hotel Tulsa.

THE ALUMNI ASSOCIATION OF THE UNIVERSITY OF OKLAHOMA SCHOOL OF MEDICINE

Honoring Class of 1917—Introduction by M. B. Lhevine, M.D., Tulsa.

Honoring Class of 1927—Introduction by M. O. Hart, M.D., Tulsa.

Honoring Class of 1937—Introduction by C. G. Stuard, M.D., Tulsa.

In honor of C. B. Taylor, M.D., Emeritus Professor of Urology
R. H. Akin, M.D., Oklahoma City

In honor of W. W. Wells, M.D., Emeritus Professor of Obstetrics
J. B. Eskridge, Jr., M.D., Oklahoma City

Friday — May 16

6:00 P.M.-7:00 P.M.—Tulsa County Party honoring Association members and wives.
Hotel Tulsa
Lower Floor — Exhibit Room

7:00 P.M.—President's Inaugural Dinner Dance.
Hotel Tulsa
Topaz Room, Mezzanine

Guest Speaker, R. L. Sensenich, M.D., South Bend
Chairman Board of Trustees of the American Medical Association

ANNUAL MEETING COMMITTEES - 1947

Annual Meeting Committee: L. C. Kuyrkendall, M.D., McAlester; Paul B. Champlin, M.D., Enid; Lewis J. Moorman, M.D., Oklahoma City.

Scientific Work Committee: Maurice J. Searle, M.D., Tulsa, Chairman; W. W. Sanger, M.D., Oklahoma City; Homer A. Ruprecht, M.D., Tulsa; J. M. Parrish, M.D., Oklahoma City; J. H. Robinson, M.D., Oklahoma City; W. A. Showman, M.D., Tulsa.

TULSA COMMITTEES

General Chairman: John McDonald, M.D.

Publicity: E. Rankin Denny, M.D., Chairman; Charles G. Stuard, M.D.; Franklin D. Sinclair, M.D.; Henry S. Browne, M.D.

Social and Entertainment: W. A. Showman, M.D., Chairman; Robert E. Funk, M.D.; Paul Grosshart, M.D.

Commercial Exhibits: Frank J. Nelson, M.D., Chairman; G. H. Henry, M.D.; Bernard L. Branley, M.D.

Registration: Walter S. Larrabee, M.D., Chairman; Fred E. Woodson, M.D.; J. D. Shipp, M.D.

Reservation and Hotels: H. B. Stewart, M.D., Chairman; Hays R. Yandell, M.D.; Frank A. Stuart, M.D.

TECHNICAL EXHIBITS

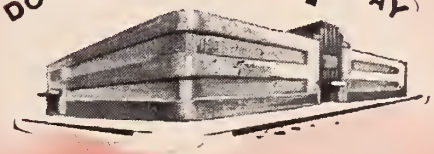
The following companies will exhibit at the 54th Annual Meeting. Plans have been made for well arranged, helpful booths. Make it a point to visit the technical exhibits to see what the companies are offering the profession.

Booth No.	*Firm*	*Location*
1	C. V. Mosby Company	St. Louis
2	G. D. Searle and Company	Chicago
3	The Ediphone Company	Oklahoma City
4	Warren-Teed Products Company	Columbus
5	J. B. Lippincott Company	Philadelphia
6	Mead Johnson and Company	Evansville
7	The Smith-Dorsey Company	Lincoln
8	General Electric X-Ray Company	Oklahoma City
9	Eli Lilly and Company	Indianapolis
10	Wm. S. Merrell Company	Cincinnati
11	Philip Morris and Company	New York
12	Mid-West Surgical Supply Company	Wichita
13	Audiphone Company	Tulsa
14	Seiler Surgical Company	Omaha
15	Schering Corporation	Bloomfield
16 and 17	Midwest X-Ray and Supply Company	Tulsa
18	W. C. Scott Company	Kansas City
19	Holland-Rantos Company	New York
20	Producers Creamery Company	Springfield
21	Physicians Sales and Service	Oklahoma City
22	Kay Pharmacal Company	Tulsa
23 and 24	Coca-Cola Company	Atlanta
25	Caviness-Melton Supply Company	Oklahoma City
26	F. A. Davis Company	Philadelphia
27	E. R. Squibb and Sons	New York
28	H. G. Fischer and Company	Chicago
29	United Medical Equipment Company	Kansas City
30	Roach Drug Company	Oklahoma City
31	Ortho Pharmaceutical Corporation	Linden
32	Sharp and Dohme, Incorporated	Philadelphia
33	A. S. Aloe Company	St. Louis
34 and 35	Merkel X-Ray Company	Tulsa
36	U. S. Vitamin Corporation	Chicago
37	Postgraduate Committee, Oklahoma State Medical Association	Oklahoma City
38	Barclay-Curtis Company	Oklahoma City
39	Ciba Pharmaceutical Company	Summit
40	Maico Company of Tulsa	Tulsa
41	J. A. Majors Company	New Orleans
42	Lederle Laboratories	New York
43	Hoffman-La Roche, Incorporated	Nutley

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COUNCILOR REPORTS

Annual Report of Councilor, District No. 1

To the House of Delegates,
Oklahoma State Medical Association:

I wish to submit my Annual Report as Councilor of District No. 1 of the Oklahoma State Medical Association.

I have attended five meetings of the Woods County Medical Society which includes the Alfalfa County Medical Society. I have attended the Woodward Medical Society two times since the last Annual Report.

I have attended three Council Meetings at Oklahoma City but missed the last Annual Meeting on account of the date being concurrent with the sale of my household goods and a move to a new location. I have assisted in the collection of annual dues by writing a number of letters to secretaries and individuals.

I also assisted in the collection of the special assessment of last year and have written many letters urging that the special assessment be paid. I understand that one of the members of my district has not paid even yet but I have written him urging him to either pay the assessment or get his Society to pass a resolution to the effect that it would be a great hardship for him to pay this amount.

There are at this time three active societies in my District and one inactive. Other counties are either not organized on account of too few doctors or they meet with the Woodward Medical Society.

Respectfully submitted,
O. E. Templin, M.D.
Councilor, District No. 1

Annual Report of Councilor, District No. 3

To the House of Delegates,
Oklahoma State Medical Association:

In accordance with the By-Laws of the State Association, I, as Councilor of the Third District, herewith submit my annual report.

The return of members of the profession who were in military service has relieved many of the doctors who remained at home, giving them an opportunity to attend and participate more freely in the meetings during this past year. I have noticed enthusiasm in this district markedly increased.

Numerous telephone calls were made and correspondence went out to all county secretaries to familiarize them with the special assessment and its importance, and the assessment was favorably accepted. In July, I attended a combined meeting of the Payne and Pawnee Medical Societies at Pawnee, to amalgamate the two societies. An interesting program was presented. The amalgamation of Garfield, Major, and Grant Counties has developed quite a large membership, with splendid programs and interesting activities. The amalgamation of Kay and Noble Counties took place in the latter part of the year. There is, of course, a marked increase in membership, enthusiasm, and participation.

An executive committee dinner meeting of the third councilor district was held September 19, 1946, in the Jens-Marie Hotel in connection with the September meeting of the Kay County Medical Society. Members of the executive committee are Dr. Roscoe Baker of Enid, Dr. Haskell Smith of Stillwater, Dr. R. B. Gibson of Ponca City, and myself. The main address at the dinner was given by Dr. Jacques P. Gray, dean of the University of Oklahoma School of Medicine. He spoke on the problems with which the University of Oklahoma School of Medicine has to deal. Guests present were: Dr. Paul B. Champlin, Enid, president-elect of the Oklahoma State Medical Association; Dr. L. G. Neal and Dr. J. C. Wagner of Ponca City; Dr. F. M. Lingenfelter, Oklahoma City, and Dick Graham, Executive Secretary, Oklahoma City. Immediately following this meeting, all representatives met with the monthly Kay County Medical Society at the Ponca City Hospital, where a very interesting scientific program was presented. Dr. Lingenfelter gave a scientific lecture on "Cancer of the Thyroid." Dick Graham discussed "Medical Legislative Problems." A 100 per cent attendance of Ponca City physicians was recorded, and Blackwell, Tonkawa, Ralston, Shidler, and Newkirk were represented.

It has been a sincere pleasure to represent the profession of this district, and to serve as a member of the Executive Committee during the past year.

Respectfully submitted,
C. E. Northcutt, M.D.
Councilor, District No. 3

Annual Report of Councilor, District No. 4

To the House of Delegates,
Oklahoma State Medical Association:

It is my pleasure to submit my first annual report as Councilor of the Fourth District. I consider my situation a most fortunate one because my District is made up of six good county societies which are functioning satisfactorily and which are all in close proximity to the state offices.

The outstanding thing of course, during the past year, has been the return of large numbers of doctors from military service to resume civilian practice. Many of these had their same office space awaiting them while others, not so fortunate, experienced considerable difficulty in obtaining space. And then many new men have located in this district, particularly in Oklahoma City. It has been gratifying to see how well these doctors, who have been away so long, have settled back into their places in the community and have taken up their responsibilities in their professional organizations.

The extra assessment met with less objections than was anticipated by some. Since many were not well acquainted with the needs and purposes for such a measure some misunderstandings were bound to arise. The problem of dealing with the few who have not paid the assessment is being handled by the respective societies with every effort to be fair and to avoid working hardships on any one. It is my own observation that this sort of thing, once it is understood by all, only helps to bring the profession more closely together.

In accordance with a resolution passed by the House of Delegates, at the last meeting an executive committee composed of representatives from each county society of the district has been formed to act as an advisory committee to the councilor. Following each council meeting this committee has either been called together or each of its members has been sent a copy of the minutes of the meeting. In this way each county society is able to keep its members informed regarding the actions of the Council.

It has not been possible, as yet, to work out a program and arrange for a Councilor District Meeting.

It happens that there are many meetings and activities in this district which are related either directly or

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indirectly to the State Medical Association. It was our pleasure to entertain the annual convention of the State Association in Oklahoma City this past year. The annual fall meeting of the Oklahoma City Clinical Society last November was highly successful and very well attended. The Washington Birthday Clinics and the Oklahoma State Meeting of the American College of Physicians on February 22 was attended by doctors from various parts of the state. The Oklahoma Medical Research Foundation, working from its headquarters here, is organizing the entire state in a thorough and efficient way for its forthcoming campaign. The assurance of a new Veterans Administration hospital of 1,000 beds in Oklahoma City will help relieve the critical hospital shortage that exists throughout the state.

While one hears a few complaints here and there about special assessments and increased dues, still there has never been a time when the profession, as a whole, has been so closely united as at present. One gets the impression that we are on the threshold of a great era of progress and development in the handling of health problems of the community and that we are about to assume an active leadership never before dreamed of.

Respectfully submitted,
Carroll M. Pounders, M.D.
Councilor, District No. 4

Annual Report of Councilor, District No. 7

To the House of Delegates,
Oklahoma State Medical Association:

In accordance with custom of long standing the Councilor of the Seventh District submits a report for the fiscal year 1946-47.

The Councilor has attended meetings in every county of the District where meetings are held regularly and has gained much in acquaintance and in satisfaction in coming to know the doctors of the Seventh District better. The Councilor has also attended every meeting of the Council except when absolutely prevented from so doing because of absence from the State.

The response to increased responsibility to the economy of medicine and to the organization of physicians as such has been most satisfactory. Very little difficulty has been sustained in the collection of an increased amount of money in dues and practically all comment in regard to the assessment has been favorable.

One Council District Meeting in late October was held in Shawnee and another is planned in the very near future. The attendance at the meeting was more satisfactory and the members attending expressed their hearty approval of the idea.

Respectfully submitted,
Clinton Gallaher, M.D.
Councilor, District No. 7

Annual Report of Councilor, District No. 8

To the House of Delegates,
Oklahoma State Medical Association:

There has not been a great deal of visiting done by the Councilor to the different counties in the Eighth Councilor District since the Medical Association meeting May 19, 1946. This was on account of the fact that the Councilor was confined in the hospital himself part of 1946 and the pressure of looking after the sick in our immediate territory.

We have arranged two Councilor meetings. The first is to be held in Okmulgee March 11, 1947, to which the physicians of the seven counties have been invited to attend. This includes Muskogee, Wagoner, Adair-Mayes-Sequoyah, Okmulgee, and Okfuskee. We expect a very good attendance of this meeting.

The second meeting of the northern half of the Eighth District will be held in Vinita on Tuesday, March 25, 1947. The program in each meeting will be furnished by the State Medical Association.

I am informed by the secretaries of the different counties that this has been a very successful year from the standpoint of treating the sick, as well as the financial condition of the different County Societies.

Respectfully submitted,
J. G. Edwards, M.D.
Councilor, District No. 8

Annual Report of Councilor, District No. 10

To the House of Delegates,
Oklahoma State Medical Association:

In accordance with the By-Laws of the Oklahoma State Medical Association, I respectfully submit, herewith, the Annual Report of the activities of the Tenth Councilor District for the fiscal year 1946-47.

It is with sincere regret that I make this report because in so doing I am deeply aware of the fact that I was called upon to attempt to fill the vacancy created here and by the untimely death of my beloved father, Dr. John A. Haynie, on July 29, 1946, who was Councilor from the Tenth District of the Oklahoma State Medical Association. It has been my observation in the greed and jealousness among men that few of us ever attain the right to be judged by God and our fellowman by the great achievements which we have accomplished. Therefore, it behooves the remaining ones of us to be judged by the small things which we might attain. And so, it is with the loss of my father to a great number of you, it is only another death, but to me and mine it is an untold loss which can only be met by the sweet, unblemished memory of the past and the challenge of the uncertainty of the near and distant future.

The corner stone of the amalgamation of the component county societies of this district had been carefully laid following the State meeting in 1946. I am pleased to report that the amalgamation of the Atoka, Bryan, Coal County Societies and the Choctaw, McCurtain, and Pushmataha Societies have been accomplished, contingent, of course, on the approval of the House of Delegates. Preliminary ground work has been done inviting the doctors who are eligible in Johnston County and the Marshall County Society to join the Atoka, Bryan, Coal Society.

My father, before me, and I likewise, feel that it is a distinct and genuine pleasure to have represented the medical profession of Atoka, Bryan, Coal, Johnston, Marshall, McCurtain, and Pushmataha Counties as their Councilor during the fiscal year 1946-47. He was, and I am likewise, deeply grateful for the honor and privilege.

Respectfully submitted,
W. K. Haynie, M.D.
Councilor, District No. 10

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COMMITTEE REPORTS

Report of the Medical Advisory Committee to the State Department of Public Welfare

The Medical Advisory Committee to the Department of Public Welfare is composed of six members. These are, Dr. Mack I. Shanholtz, Chairman; Dr. James O. Asher; Dr. F. P. Baker; Dr. Joseph W. Kelso; Dr. M. P. Prosser; and Dr. L. E. Woods. Regular meetings are held each quarter. The representative of the State Department of Public Welfare, Miss Stella Qualls, meets with the Committee to present problems and questions on which the agency requests consultation.

The Social Security Act provides that families meet certain requirements in order to be eligible for this type of assistance. These include financial need, State residence, age under 16, or 18 if attending school, and that the children be deprived of parental support or care because of the death, absence from the home, or physical or mental incapacity of one or both of the parents. For the past six years the Committee has functioned in an advisory capacity to the Department of Public Welfare regarding the cases in which physical or mental incapacity of parents is a factor of eligibility.

Members of the Committee review all new applicants for assistance in which incapacity is a factor. They are responsible for giving an opinion as to whether or not medical information from the local doctor is adequate to indicate whether or not the parent's activity is specifically limited by a physical or mental incapacity to the extent that children for whom aid is requested are deprived of parental support or care. In some instances the Committee finds it necessary to request that more medical information be secured in order to make an accurate decision. The number of requests of this type have decreased as physicians over the State have become more aware of the need for this information. During the past year it was necessary in only three per cent of all examination reports studied to request that the patient return for a second examination. The Committee not only indicates whether or not they consider the person is disabled to the extent that his activities are limited, but they also make suggestions to the social workers of the Department as to possibilities for rehabilitation of handicapped individuals. Limited facilities and lack of funds for treatment have hindered people from getting these needed services, as the agency does not have resources for medical care.

During the calendar year, 1946, there were 3,654 cases studied by the Medical Advisory Committee. This included 2,827 new cases and 809 cases already known to the agency. Of this number, 3,154 were considered disabled and 327 were not.

The agency provides that any person who is not satisfied with the decision may file an appeal and have his case reconsidered. Out of 327 cases in which the person was found not disabled, only 18 requested a hearing. Further medical examination of these persons revealed that ten had conditions which were disabling and eight were not disabled.

A statistical report showing the total number of cases studied and action taken by the Committee during the year 1946 is shown in the following table.

1. Cases pending January 1, 1946		165
2. Cases referred to M.A.C. during 1946		3654
A. Applications	2827	
B. Cases receiving assistance	809	
1. Review examination requested by county dept.	76	
2. Re-examination requested by M.A.C. in previous review	733	
C. Hearings	18	
3. Total cases under consideration		3819
4. Cases disposed of since last report		3537
A. Review by M.A.C. completed	3481	
1. Disabled because of physical or mental incapacity	3154	
2. Able to engage in any normal activity	327	
B. Disposed of for other reasons	49	
C. Fair hearings	18	
5. Cases pending, December 31, 1946		282

Respectfully submitted,

Mack I. Shanholtz, M.D., Chairman
James O. Asher, M.D.
F. P. Baker, M.D.
Joseph W. Kelso, M.D.
M. P. Prosser, M.D.
L. E. Woods, M.D.

Report of the Committee on Postgraduate Medical Teaching

The Postgraduate Committee makes the following report for 1946. On September 20, 1946, the two-year program in Surgical Diagnosis was finished. Dr. Patrick P. T. Wu of Changhai, China, our last instructor, was very instructive as well as pleasing. Due to problems which can be attributed to the war, the Surgical Diagnosis course was finally completed in spite of many difficulties. The registration was very good considering the numerous doctors absent in the Service. The percentage of attendance throughout the State was excellent which, in itself, speaks highly for the instructor. Nearly 800 private consultations were held by Dr. Wu and 25 lay lectures were given to 2,435 people. On September 22, Dr. and Mrs. Wu left hospitable Oklahoma for Hongkong, China, by way of San Francisco.

Before the completion of the State-wide program in Surgical Diagnosis, feelers were being sent out for a competent instructor in Gynecology. The Committee was more than happy when Dr. J. R. Bromwell Branch of Macon, Georgia, consented to teach Gynecology throughout the State. Dr. Branch taught a two-year program in Surgical Diagnosis followed by a two-year program in Gynecology in Tennessee. His popularity in Tennessee was so great that he was urged to teach a third course but came to Oklahoma instead.

Dr. Branch received his A.B. degree from Johns Hopkins and his M.D. degree from Johns Hopkins Medical School. After spending seven years in the hospitals of Johns Hopkins and Macon, Georgia, he taught and practiced surgery and gynecology at the Yale Medical School in Changsha, China, for 12 years. He then spent two years in Gynecological Clinics at Hopkins, Mayo Clinic, and others in Chicago and Buffalo, N. Y. Another extensive study was spent in the clinics of Edinburg, Belfast, Dublin, London, and Paris under the Rockefeller Foundation Fellowship. From 1928 to 1940 Dr. Branch practiced and taught Gynecology in Shanghai, China. Since 1940 he has been practicing Gynecology in this country and doing postgraduate teaching.

Your Postgraduate Committee has increased the cost of the present course somewhat over the cost of the

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previous courses. As was verbally reported to the House of Delegates a year ago, postgraduate teaching in Oklahoma should be self-supporting. The Commonwealth Fund of New York, which has so liberally aided us in our finances, fully intended, and still intends, the postgraduate study carried on through this Committee be self-supporting.

During the past eight years The Commonwealth Fund has given $89,160.00. This amount is nearly six times as much as our own State Medical Association has given. The Oklahoma State Health Department, through Dr. Grady F. Mathews, Commissioner, has been very liberal in their aid, giving approximately half as much as The Commonwealth Fund. The doctors who have received these courses have paid approximately 13 per cent of the total amount contributed.

The Committee thanks The Commonwealth Fuud of New York, the Oklahoma State Health Department, and the Oklahoma State Medical Association for their cooperation and financial assistance. It further recommends that the House of Delegates, by resolution, express its appreciation to these agencies.

We are pleased to announce the postgraduate course in Gynecology is well on its way. The first circuit now in progress of completion has been very successful. Dr. Branch is an unusually capable teacher, has a pleasing personality, and we predict that he will be looked upon as the outstanding instructor of our mauy years of postgraduate teaching.

The second circuit will open in Eastern Oklahoma on April 14, with Muskogee, Okmulgee, Tahlequah, McAlester, aud Poteau as teaching centers.

Respectfully submitted,

Gregory E. Stanbro, M.D., Chairman
Philip Risser, M.D.
R. N. Holcombe, M.D.
Russell Pigford, M.D.
Wann Langston, M.D.
H. C. Weber, M.D.
Floyd T. Bartheld, M.D.
H. M. McClure, M.D.
Grady F. Mathews, M.D.

Report of the Committee on the Study and Control of Tuberculosis

With funds made available by the sale of Christmas Seals the Oklahoma County Health Association has purchased an up-to-date mobile x-ray unit at a cost of approximately $26,000.00. Every citizen of Oklahoma County over 14 years of age will be entitled to an x-ray of the chest free of charge. The idea of this survey is to obtain x-rays of as many Oklahoma County residents as possible and to discover cases of tuberculosis that probably would not be ascertained otherwise. Those who show evidence of active disease or suspicious-looking shadows in the chest will be referred to the physician of their choice for further studies and advice. The indigent will be advised to have 14 x 17 films and any other laboratory procedures that might be indicated through the Tuberculosis Dispensary at 600 S. Hudson. It is hoped that active cases can be placed in institutions so that they will not be a source of danger to the public and where they can receive the proper treatment and those who are restored to health can be rehabilitated.

Special cards will be used conveying pertineut data in regard to the x-ray aud every person who has an x-ray will receive a report of the findings whether negative or positive. A complete filing system will be set up at the Oklahoma County Health Association, 600 S. Hudson. It is hoped that the private physicians to whom suspects are referred will furnish the Oklahoma County Health Association the results of his follow up so that the files there will be complete. The proposed plan has been approved by the Oklahoma County Medical Society.

There are many details that must yet be worked out. The many requests that have already been received indicate that the public is vitally interested in such a plan. The survey will first cover Oklahoma City and the unit will then go to the smaller towns throughout the county.

The marked decline iu the death rate from tuberculsis, which has dropped from first to seventh place in the last 30 years, has been due in great part to early diagnosis, in which mass x-ray surveys have played an important part.

We feel that these x-ray survey campaigns are doing a great deal toward finding early tuberculosis and in giving the proper advice about hospitalization and treatment. Also they are helping teach the advanced cases how to protect their families and the public at large.

During the war years, probably because of so much moving about and because of increased wages, the demand for beds in state sanatoria decreased. For the first time in the history of the State Sanatorium at Talihina there were empty beds and no applications on the waiting list. At the present time all available beds are filled. Two 30-bed wards which were closed during the war are now opened for men. There has been an increase in the number of older patients from 50 to 70, who are advanced and incurable cases. They were admitted chiefly because there were few applicants who were young and curable.

Since the discovery of Streptomycin many newspaper and magazine articles have appeared many of which have been misleading in that they have given false hope to the laity in leading them to believe that a specific cure for tuberculosis has finally been fouud. The cliuical use of this antibiotic in human beings has been disappointing as it was with promin, promizole, and diasone. Most and perhaps all phthisologists have been flooded with letters and phone calls for information in regard to the use of Streptomycin in tuberculosis.

Hinshaw and his associates since December, 1944, have treated 34 patients with Streptomycin. For the recommended dosage the reader is referred to the 1946 Yearbook of General Medicine. Reactions which occurred include mild malaise, aching in various muscles, and rarely more severe arthralgia. One case of transient deafness and three cases of apparent disturbance of the vestibular apparatus followed prolonged administration of large doses. Cases with extensive and progressive lesions of recent origin tend to improve in a manner resembling the natural processes of healing. Four patients with tuberculous empyema were treated with Streptomycin introduced intrapleurally; the preparation was usually irritating and therapeutic results have been either indefinite or disappointing. A few cases of miliary tuberculosis showed satisfactory response, but the final outcome is not stated.

Their conclusions are: As long as Streptomycin is difficult to procure and the toxic effects of protracted administration remain in doubt, it appears inadvisable to use it in treatment of some of the commoner forms of chronic pulmonary tuberculosis. Emphasis should be placed on the study of early and extensive hematogenous forms of pulmonary tuberculosis, genitourinary tuberculosis, suppurative tuberculous lymphadenitis, and early miliary tuberculosis. Care in a sanatorium and collapse therapy are thoroughly proved therapeutic measures,

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and in no instance should these be abandoned in favor of antibacterial agents, such as streptomycin, the effectiveness of which is yet to be conclusively demonstrated.

The committee recommends continuation of the statewide x-ray survey perhaps on a broader basis and an intensive educational program. By education the number of patients who will require long periods of hospitalization will be decreased. There are an increasing number of doctors throughout the State who can give pneumothorax, thereby permitting earlier release from the sanatorium.

Adequate sums should be appropriated to the State Sanatoria so they will be able to pay better salaries, get more help, build more dormitories for employees, and reactivate the beds that have been unused.

We might add that if more hospital beds are obtained that the institutions should be freed from political control and interference, and salaries should be adequate to impress and attract competent well-trained physicians and nurses. Such an attainment would eliminate the frequent complaints and dissatisfaction of patients who refuse to accept the treatment now prevailing in some of our State tuberculosis hospitals.

Respectfully submitted,
Floyd Moorman, M.D., Chairman
R. M. Shepard, M.D.
F. P. Baker, M.D.

Report of the Crippled Children's Committee

The Crippled Children's Committee of the State Medical Association wishes to report that the various agencies interested in the care of crippled children fully recognize the importance of cooperation with the medical profession. The greatest controversy to be settled during the period 1946-47 has been that of the care of poliomyelitis cases. This disease is classed as infectious and contagious. The general hospitals throughout the State consistently refuse to accept these cases. It has been necessary to send practically all these cases to the Crippled Children's Hospital in Oklahoma City. A great many of the cases are able to pay for their own hospital and medical care but have been forced to go to the Crippled Children's Hospital notwithstanding.

There are two agencies especially interested in the care of poliomyelitis cases: One, the National Foundation for Infantile Paralysis; Two, the Sister Kenney Foundation for Infantile Paralysis. Both of these organizations have funds contributed by the public, which they insist must be paid to the doctor and the hospital for care of poliomyelitis cases.

At the present time there is no fee schedule whereby doctors in Oklahoma can accept uniform fees for attention to this type of case. The Crippled Children's Hospital is supported by State appropriation and the doctors on the staff are subject to the Crippled Children's Act which does not provide fees for cases committed to the Crippled Children's Hospital.

Two special meetings were called during the year. At the first meeting representatives of the various agencies were called in and a great deal of discussion took place but no decisions were rendered. In November, 1946, Dr. Van Ripper of Washington, D. C., was present and represented the National Foundation for Infantile Paralysis. He proved to the satisfaction of the Committee that the Foundation intended to do only what was right in the eyes of the medical profession of Oklahoma. He indicated that suitable fees and regulations could be established. A committee has been appointed to recommend such fees and regulations, but at this report these regulations are not completed.

The Committee will be glad to hear from any member of the medical profession relative to the treatment of poliomyelitis cases.

Respectfully submitted,
Earl D. McBride, M.D., Chairman
L. S. Willour, M.D.
Ben H. Nicholson, M.D.
D. H. O'Donoghue, M.D.
C. A. Traverse, M.D.
Hugh Graham, M.D.
Ian MacKenzie, M.D.

Report of the Medical Advisory Committee to the Vocational Rehabilitation Division

The Chairman of the Medical Advisory Committee to the Vocational Rehabilitation Division of the State Board of Education herewith submits the annual report of that Committee.

This Committee was specifically charged with the accomplishment of three functions. The first constituted an endeavor to establish a fee schedule for the Vocational Rehabilitation Division. There was the consideration of routine examination, consultations, surgical procedures, dental care, and hospitalization. The committee at long last arrived at a decision in regard to these items and the fee schedule was submitted for approval. Since that time the discussion of the veterans' fee schedule has occupied the position of apparently greater authority and significance. The committee therefore rests its case.

The committee was also asked to make a list of qualified consultants in the various specialties. This matter was discussed for more than a year and hundreds of interviews were had in an effort to arrive at some satisfactory answer. In the end it was necessary to assume the following as correct:

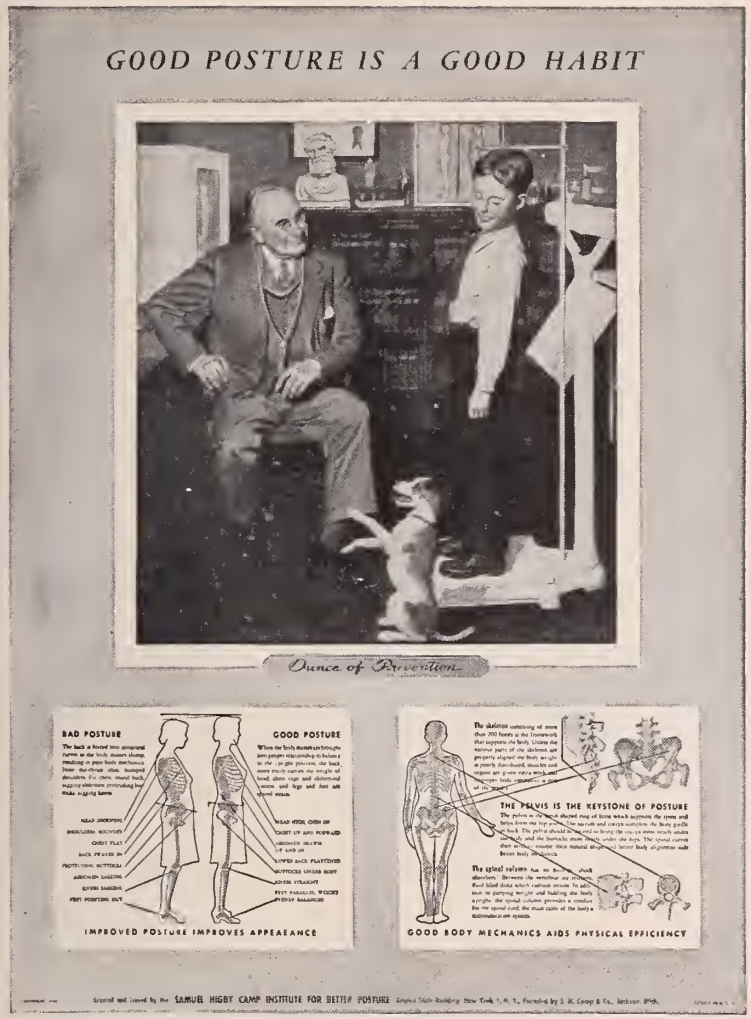
1. The American Boards and Colleges have done the basic classification in this State in a manner in which we do not feel competent to improve upon.
2. In cases where no regularly qualified specialist is available the committee suggests that the answer be obtained from some prominent physician living in the community in question.

The third function of the committee was the appointment of a part-time physician for the purpose of reviewing individual case reports and recommending proper action to Mr. Voyle Scurlock. After some deliberation Dr. Francis Dill was appointed and has continued.

Respectfully submitted,
Clinton Gallaher, M.D., Chairman
J. O. Asher, M.D.
Bert F. Keltz, M.D.
John Perry, M.D.
Fred Pitney, D.D.S.
Mr. Harry Smith

Report of the Committee for the Study and Control of Cancer

During the past year the members of your committee have had an exceptional opportunity to aid and direct the development of a cancer control program. This opportunity has been provided by the financial resources and organization of the Oklahoma Division of the American Cancer Society. All members of your committee are members of the Division's Board of Directors. A majority of that Boards of Director and of its Executive Committee are, by requirement, members of the Oklahoma State Medical Association. The non-medical members of the Cancer Society, while insistent upon an aggressive program for cancer control, have shown complete willingness to be guided by its medical members in all matters. Hence the activities of the Cancer Society are under the



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guidance of your Committee for the Study and Control of Cancer. The program is outlined in this report.

Until quite recently the work of the Cancer Society has been confined to public education. To this educational program have been added: A plan for assisting indigent cancer patients in obtaining treatment; aid in making available tissue examination for indigent patients; postgraduate refresher courses on cancer for physicians; and furnishing funds for the support of cancer research.

The educational program has developed as the culmination of ten years of effort. There is now a permanent organized unit of the Cancer Society in nearly every county in the State. These units consist of interested women and business and professional men, including many physicians. Newspaper editors are among the most interested workers.

Information is distributed through every available means. During 1946, 4,000 newspaper articles, advertisements and editorials appeared in Oklahoma. This, incidentally, established a national record. There has been liberal allotment of time to cancer programs on Oklahoma radio stations. There have been cancer programs presented at some 700 non-medical meetings with audiences of up to 2,000 people. Exhibits were prepared and shown at 45 county fairs and at three state fairs. Over 400,000 pieces of literature were distributed. Home study courses on cancer were distributed to 50,000 rural families.

Many thousands of people in Oklahoma have been told that cancer is curable and that it can be conquered by knowledge. They have been taught signs and symptoms suggestive of cancer. Consistently and continually these people have been instructed to consult their doctors.

Some years ago the month of April was declared "Cancer Month" by presidential proclamation. During this month a tremendous campaign of publicity regarding cancer appears all over the nation. Radio programs, movie features, magazine articles, large sponsored advertisements, billboards, showcards, public meetings, club programs, and widespread distribution of literature will be used to make the public more "cancer conscious." People will be told over and over again that one of every eight living Oklahomans will die of cancer unless something is done about it. They will be told also that from 30 to 50 per cent of these death can be avoided by early diagnosis and prompt and adequate treatment. The immediate purpose of this annual campaign is to raise money. The fundamental purpose for which that money is given is to save the lives of patients who have cancer. Doctors spend a large part of their professional lives working toward an identical objective.

Because of this educational campaign many patients are now coming to treatment in the curable stages of cancer who would not otherwise have done so. Because they have been taught the value of early diagnosis and of prompt and adequate treatment they are demanding that the funds given for cancer control be used in providing these things for people who have cancer.

In answer to this demand for service to cancer patients, the American Cancer Society, working directly with the American College of Surgeons, has outlined a comprehensive service program. It includes four main facilities. These are: Information Centers, Well Person or Detection Clinic, Diagnostic Clinics, and Cancer Clinics which provide complete treatment facilities. The requirements for the latter two have been carefully outlined by the American College of Surgeons.

A little more than a year ago a Mobile Cancer Detection Clinic was conceived by Oklahoma physicians and planned and put into operation by aid of the funds and organization of the Oklahoma Division of the American Cancer Society. This was the first such clinic in the country and has received national recognition and acclaim. By May of 1947 the clinic will have visited nearly every county in the State, designedly upon invitation of the county medical societies. Some 5,000 people have been examined by approximately 150 members of the Oklahoma State Medical Association. These doctors have donated over 2,000 hours of their time and have driven over 10,000 miles in attending these clinics. In the first 44 clinics held, 723 cases of cancer were found. A recent survey of all doctors in areas which had been visited by the clinics demonstrated the effectiveness of the clinics beyond direct service to patients who attended them. Most of these doctors indicated that an increased number of patients had consulted them for examination regarding cancer because of the publicity which accompanied the visits of the clinic. Eighty-two per cent of the physicians replying to the survey approved of an annual repeat visit of the clinic to their communities.

Numerous calls have come to the office of the Cancer Society for funds to enable indigent patients to obtain diagnostic services and treatment. Usually in these instances the charity funds of the county concerned have been exhausted or are otherwise unavailable to assist these patients. A Federal Grant-in-Aid fund is available to provide hospitalization for diagnosis only and for three days only for such patients. This fund is under the administration of the Oklahoma State Department of Health.

The Cancer Society is developing a plan for assistance of such indigent cancer patients. The plan is to provide funds for transportation to and from the University Hospital in Oklahoma City; to provide funds for room and board for ambulatory patients while they are under treatment; and to pay for hospitalization for a period of 21 days or less when necessary for treatment. To be eligible under this aid program a patient must meet certain requirements. First, he must have a positive diagnosis of cancer as determined by a recognized physician. Second, he must be unable to pay his own transportation, board and room charges or hospitalization costs as needed. Third, the local county charity fund must be exhausted so far as his needs are concerned. Fourth, admission to the University Hospital must be arranged. The patient's eligibility is determined by his local physician and by the local County Cancer Aid Committee. This committee will be composed of the Commander of the local unit of the Cancer Society, the secretary of the local County Medical Society, and the local physician who has been elected its medical advisor by the local unit. Hospital care of incurables is not provided under this plan. No payment to any doctor for medical or surgical services is proposed nor contemplated. The University Hospital is the only hospital concerned in the contemplated operation of the plan at the start. As the program develops other hospitals which have adequate approved facilities may be included.

Busy doctors must be kept informed of recent developments in cancer diagnosis and treatment. Too, they must be even more "cancer conscious" than their patients. A very important part of the cancer control program is to provide postgraduate refresher courses for doctors. The survey mentioned above indicated a desire for such a course in Oklahoma. Men nationally prominent in various fields of cancer work will teach such a course in ten centers in the State during the coming year. The course will be modeled after the recent course on surgical diagnosis and will be managed by the Postgraduate Committee of the Oklahoma State Medical Association. A bulletin discussing cancer of



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various systems and organs in a practical clinical manner will be distributed to each member of the association during the coming year.

The Cancer Society office will provide prepared bottles for biopsy specimens to any member of the state association upon request. When these are returned along with a short blank giving pertinent information they are referred in rotation to members of the Oklahoma Association of Pathologists. The members of this association have agreed to examine such tissue specimens free of charge for indigent patients. Reports are sent directly to the referring physicians.

The National Research Council through its Committee on Growth of the Medical Sciences Division is planning and directing a program of research on cancer as comprehensive as the program of research which developed the atomic bomb. From Oklahoma two projects in basic cancer research were submitted to the Committee on Growth and have been approved by it as a part of the program. Funds for the support of these two projects have been appropriated to the School of Medicine by the Cancer Society. In addition a fund has been appropriated to the Oklahoma Medical Research Foundation for work on cancer problems.

There are at present in Oklahoma no hospitals which meet the College of Surgeons' requirements for approved Cancer Clinics. There are several hospitals which have all the necessary ingredients, such as competent professional personnel, surgical facilities, x-ray facilities, and available radium. A definite organization for correlated work is required and this is lacking at present. A definite effort is being made to aid the formation of such an approved clinic at University Hospital. Other hospitals will be encouraged and aided in organizing clinics also.

Your committee and the other members of the Oklahoma Division of the American Cancer Society are desirous that every member of the Oklahoma State Medical Association shall be familiar with the purposes, policies, and operation of the cancer control program as outlined above. The approval and cooperation of physicians are absolutely essential to any measure of success which may be attained.

Respectfully submitted,

L. C. McHenry, M.D., Chairman
Ralph McGill, M.D.
W. F. Keller, M.D.
C. P. Bondurant, M.D.
E. D. Greenberger, M.D.
Joseph Kelso, M.D.
Homer A. Ruprecht, M.D.
J. F. McMurry, M.D.
Paul B. Champlin, M.D.

Report of the Committee on Necrology

The Committee on Necrology submits the following report to the House of Delegates.

As the years go on through peace and war, the physician will continue to give of himself without thought of himself, as the call of duty always remains the same. He must carry on. To those who will no longer hear the call of his profession, all homage is paid.

In honor of those members of the Association who have passed away during the past year, the Necrology Committee submits the following resolution for adoption by the House of Delegates:

WHEREAS, thirty-two of our members have passed to the Great Beyond since the 1946 report of the Necrology Committee of the Association,

THEREFORE, BE IT RESOLVED, that the House of Delegates of the Oklahoma State Medical Association recognize the demise of those former fellow members and instruct the Secretary to inscribe with honor and regret the following names upon the records of the Association.

James C. Braswell	Tulsa	June, 1946
W. T. Ray	Gould	May, 1946
A. R. Lewis	Okla. City	May, 1946
T. J. Jackson	Ardmore	May, 1946
L. T. Gooch	Lawton	June, 1946
F. B. Erwin	Okla. City	June, 1946
F. Z. Winchell	Buffalo	July, 1946
A. J. Wells	Calera	July, 1946
John A. Haynie	Durant	August, 1946
C. M. Tracy	Sentinel	August, 1946
Elsie Specht	Fairview	August, 1946
E. K. Collier	Tipton	August, 1946
George H. Clulow	Supply	August, 1946
L. C. Vance	Ponca City	September, 1946
T. D. Rowland	Shawnee	September, 1946
William E. Van Cleave	McAlester	October, 1946
Pirl B. Myers	El Reno	October, 1946
John F. Martin	Stillwater	October, 1946
I. A. Nelson	Tulsa	October, 1946
Richard B. Ford	Tulsa	November, 1946
F. M. Edwards	Ringling	December, 1946
Wendell Long	Okla. City	December, 1946
Swartz Baines	Tahlequah	January, 1947
J. E. Hughes	Shawnee	January, 1947
J. T. Nichols	Muskogee	January, 1947
J. D. Osborn	Frederick	January, 1947
Harvey K. Dever	El Reno	February, 1947
M. D. Carnell	Okmulgee	February, 1947
George Hunter	Okla. City	February, 1947
Walter L. Stephenson	Aline	February, 1947
C. O. Gose	Hennessey	March, 1947
W. H. Cantrell	Okla. City	March, 1947

Respectfully submitted,

F. W. Boadway, M.D. Chairman
E. S. Lain, M.D.

HAVE YOU PAID YOUR 1947 DUES?

Have you paid your 1947 local and Oklahoma State Medical Association dues to your County Society Secretary? If not, this should be done immediately, so that your local Secretary can forward the State dues to the Association office.

The Constitution and By-Laws provide that dues are payable on or before January 1 annually. Dues must be paid promptly to keep your membership from lapsing.

1947 Membership Cards must be presented at the Annual Meeting before you are eligible to register. This is important. Don't delay.



1 Evidence obtained by direct color photography shows that "RAMSES"* Vaginal Jelly forms an occlusive film over the cervical os which remains for as long as ten hours postcoitus.

2 An independent accredited laboratory, after comprehensive testing, reports that it is rapidly spermatocidal and totally free of toxic or irritating properties.

3 Clinical tests conducted by a prominent research organization establish its effectiveness; also that it may be used continuously without untoward effect.

4 "RAMSES" Vaginal Jelly is offered for use under the guidance of physicians. It is supplied to patients through prescription pharmacies in packages containing a large tube of jelly with applicator at $1.25. Refills without applicator $1.00.

Physicians interested in obtaining complete information on conception control are invited to write for our revised Physicians' Manual.

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DELEGATES AND ALTERNATES

In compliance with the By-Laws of the Oklahoma State Medical Association, the following listed delegates and alternates have been reported as representatives of their county societies to the House of Delegates. Credential cards will be issued to these delegates and alternates, which must be presented to the Credentials Committee prior to the first meeting of the House of Delegates on May 13, 1947.

County	*Delegate*	*Alternate*
Alfalfa	Jack F. Parsons, Cherokee	G. G. Harris, Helena
Atoka-Coal	W. W. Cotton, Atoka	R. W. Lowrey, Atoka
	J. B. Clark, Coalgate	J. J. Hipes, Coalgate
Beckham	O. C. Standifer, Elk City	J. E. Levick, Elk City
Blaine	Not Reported	Not Reported
Bryan	W. K. Haynie, Durant	Maurice Huckins, Durant
Caddo	J. B. Miles, Anadarko	E. T. Cook, Jr., Anadarko
Canadian	J. T. Phelps, El Reno	M. E. Phelps, El Reno
*Carter	J. Hobson Veazey, Ardmore	J. T. Godfrey, Ardmore
	F. W. Broadway, Ardmore	J. R. Karlick, Ardmore
Cherokee	R. K. McIntosh, Jr., Tahlequah	H. A. Masters, Tahlequah
Choctaw	E. A. Johnson, Hugo	O. R. Gregg, Hugo
Cleveland	M. P. Prosser, Norman	Orville Woodson, Norman
	O. E. Howell, Norman	T. A. Ragan, Norman
Comanche	O. L. Parsons, Lawton	W. F. Lewis, Lawton
Cotton	Not Reported	Not Reported
Craig	F. M. Adams, Vinita	L. H. McPike, Vinita
Creek	W. P. Longmire, Sapulpa	W. L. Pickhardt, Sapulpa
*Custer	McLain Rogers, Clinton	F. R. Vieregg, Clinton
	Ellis Lamb, Clinton	Gordon Williams, Weatherford
Garfield	P. W. Hopkins, Enid	Not Reported
	Bruce R. Hinson, Enid	Not Reported
Garvin	Morton E. Robberson, Wynnewood	Galvin L. Johnson, Pauls Valley
Grady	H. M. McClure, Chickasha	Not Reported
Grant	R. W. Choice, Wakita	F. P. Robinson, Pond Creek
Greer	J. B. Hollis, Mangum	R. W. Lewis, Granite
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis
Haskell	J. C. Rumley, Stigler	W. S. Carson, Keota
*Hughes	Paul Kernek, Holdenville	N. C. Riley, Holdenville
Jackson	E. A. Abernathy, Altus	R. H. Fox, Altus
Jefferson	Not Reported	Not Reported
Kay	R. B. Gibson, Ponca City	Dewey Mathews, Tonkawa
	Phillip Risser, Blackwell	David N. Fried, Blackwell
Kingfisher	C. M. Hodgson, Kingfisher	F. C. Lattimore, Kingfisher
Kiowa	Wm. Bernell, Hobart	Not Reported
LeFlore	F. P. Baker, Talihina	Not Reported
Lincoln	Ned Burleson, Prague	Carl Bailey, Stroud
Logan	Louis H. Ritzhaupt, Guthrie	James Petty, Guthrie
Marshall	Not Reported	Not Reported
Mayes	Not Reported	Not Reported
McClain	Ralph Royster, Purcell	W. C. McCurdy, Jr., Purcell
McCurtain	R. H. Sherrill, Broken Bow	J. T. Moreland, Idabel
McIntosh	Francis R. First, Jr., Checotah	W. E. Wendel, Eufaula
Muskogee-Sequoyah-Wagoner	W. N. Weaver, Muskogee	Ira C. Wolfe, Muskogee
	A. M. Dougherty, Muskogee	John H. Reynolds, Muskogee
	Howe King Riddle, Coweta	John H. Plunkett, Wagoner
	John A. Morrow, Sallisaw	Not Reported
Noble	A. M. Evans, Perry	John W. Francis, Perry
Okfuskee	A. S. Melton, Okemah	M. L. Whitney, Okemah
*Oklahoma	J. F. Burton, Oklahoma City	Everett B. Neff, Oklahoma City
	Lee K. Emenhiser, Oklahoma City	Harry Ford, Oklahoma City
	Onis G. Hazel, Oklahoma City	L. J. Starry, Oklahoma City
	George H. Kimball, Oklahoma City	J. F. Kuhn, Oklahoma City
	John H. Lamb, Oklahoma City	W. K. Ishmael, Oklahoma City
	C. M. O'Leary, Oklahoma City	Tullos O. Coston, Oklahoma City
	James R. Reed, Oklahoma City	R. Q. Goodwin, Oklahoma City
	W. W. Rucks, Jr., Oklahoma City	M. M. Appleton, Oklahoma City
	J. B. Snow, Oklahoma City	Jim Taylor, Oklahoma City
	Austin H. Bell, Oklahoma City	John P. Wolff, Oklahoma City
	Harry Deupree, Oklahoma City	D. H. O'Donoghue, Oklahoma City

County	*Delegate*	*Alternate*
	Jess Herrman, Oklahoma City	P. K. Graening, Oklahoma City
	W. E. Eastland, Oklahoma City	Allen Gibbs, Oklahoma City
	L. Chester McHenry, Oklahoma City	F. Redding Hood, Oklahoma City
	Milam F. McKinney, Oklahoma City	W. Floyd Keller, Oklahoma City
	Howard B. Shorbe, Oklahoma City	George Allen, Oklahoma City
Okmulgee	G. Y. McKinney, Henryetta	J. R. Cotteral, Henryetta
	Carlton E. Smith, Henryetta	J. C. Matheney, Okmulgee
Osage	C. S. Stotts, Fairfax	Divonis Worteu, Pawhuska
*Ottawa	W. J. Sayles, Miami	J. E. Highland, Miami
	M. A. Connell, Picher	F. L. Wormington, Miami
Payne	F. Keith Oehlschlager, Yale	Roy E. Waggoner, Stillwater
Pawnee	Harry B. Spaulding, Ralston	M. L. Saddoris, Cleveland
Pittsburg	E. H. Shuller, McAlester	L. S. Willour, McAlester
*Pontotoc-Murray	J. B. Morey, Ada	C. F. Needham, Ada
	Ollie McBride, Ada	Sam A. McKeel, Ada
Pottawatomie	W. M. Gallaher, Shawnee	C. C. Young, Shawnee
	E. E. Rice, Shawnee	J. M. Carson, Shawnee
Pushmataha	Not Reported	E. S. Patterson, Antlers
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore
Seminole	Claude S. Chambers, Seminole	Mack I. Shanholtz, Wewoka
Stephens	Not Reported	Not Reported
Texas	Morris Smith, Guymon	Not Reported
Tillman	Not Reported	Not Reported
*Tulsa	John C. Perry, Tulsa	J. S. Chalmers, Sand Springs
	L. C. Northrup, Tulsa	Charles G. Stuard, Tulsa
	Walter S. Larrabee, Tulsa	R. C. Pigford, Tulsa
	H. B. Stewart, Tulsa	Logan A. Spann, Tulsa
	M. V. Stanley, Tulsa	W. R. Turnbok, Tulsa
	H. A. Ruprecht, Tulsa	John G. Matt, Tulsa
	W. A. Showman, Tulsa	Jack O. Akins, Tulsa
	A. B. Carney, Tulsa	Frank A. Stuart, Tulsa
	W. A. Dean, Tulsa	R. G. Ray, Tulsa
*Washington-Nowata	R. W. Rucker, Bartlesville	F. S. Etter, Bartlesville
	S. A. Lang, Nowata	Felix Adams, Jr., Nowata
	L. B. Word, Bartlesville	E. E. Beechwood, Bartlesville
Washita	James F. McMurry, Sentinel	Not Reported
Woods	D. B. Ensor, Hopeton	J. F. Simon, Alva
Woodward	O. C. Newman, Shattuck	Roy Newman, Shattuck
	Myron England, Woodward	John L. Day, Supply
	Hardin Walker, Buffalo	Not Reported
	Edwin McGrew, Beaver	Not Reported

**Final statistics not available at this printing.*

HONORARY MEMBERSHIP APPLICATIONS

The following petitions for honorary membership have been initiated by County Societies and submitted for election to honorary membership by the House of Delegates in accordance with the provisions of Chapter I, Section 3, Subsection (b) of the By-Laws:

D. W. Bennett, M.D. Sentinel
(Washita County)

W. L. Stephenson, M.D. (Deceased) Alva
(Woods County)

J. E. Hughes, M.D. (Deceased) Shawnee
(Pottawatomie County)

The following names were received subsequent to Council action on the above and have not, as yet, been submitted for Council approval.

Joseph G. Breco, M.D. Ada
(Pontotoc-Murray County)

E. F. Lewis, M.D. Ada
(Pontotoc-Murray County)

S. G. Weber, M.D. Bartlesville
(Washington-Nowata County)

W. H. Shipman, M.D. Bartlesville
(Washiugton-Nowata County)

B. T. Bitting, M.D. Enid
(Garfield County)

A. W. Pigford, M.D. Tulsa
(Tulsa County)

NEWS ITEMS

CANCER SOCIETY EXPLAINS PLAN FOR INDIGENT PATIENT TISSUE EXAMINATIONS

To fnrther emphasize the previously announced procednre of free examination of suspected malignant tissne for indigent persons, the Oklahoma Division of the American Cancer Society re-announces the following established plan of operation for the information of the membership. Examinations are conducted by the Oklahoma Association of Pathologists free of charge if indigent case examinations are handled in conformity with the following plan:

1. Specimen bottles will be furnished physicians for the asking. Address request to Oklahoma Division, American Cancer Society, 206 Braniff Building, Oklahoma City.

2. All specimens are to be sent to above address where they will be referred to members of the Oklahoma Association of Pathologists, on a rotation basis.

3. The Pathologist who examines the tissne will send findings directly to the physician with a duplicate copy to the Central Registry.

4. All specimens must be accompanied by a signed case record as per copy recently sent to doctors all over the State.

COURSE IN ALLERGY OFFERED

The Mississippi Valley Sectional Instructional Course in Allergy will be given May 5 to 8 inclusive at the University of Kansas Hospital in Kansas City, Kans., under the anspices of the University of Kansas School of Medicine and sponsored by the American College of Allergists. Ronnd-table discussions, laboratory, and clinical sessions as well as formal lectures are designed to be of valne to general practitioners as well as specialists in pediatrics, otolaryngology, or dermatology. The fee for the course is $50.00 payable at the registration desk, University of Kansas School of Medicine, Kansas City, Kans. Applications for the course and for hotel reservations shonld be made with the Chairman of the Program Committee, Orval R. Withers, M.D., 1418 Bryant Building, Kansas City 6, Mo.

ATTENTION RESERVE OFFICERS, ARMY AND NAVY

There are at this time, and will continue to be, quite a number of appointees to Civil Service positions who will require physical examinations. These examinations are to be performed by designated Federal medical officers. However, since that list is relatively small, reserve officers of the Army and Navy may be considered Federal medical officers, and may conduct such physical examinations on a fee basis — if not in Government service or on active dnty. Fees charged for these examinations are born by the applicants, and not by the Civil Service Commission. Although the Commission does not stipnlate the rate of fee, it is nsually considered to be from $3 to $5. Those reserve officers of the Army and Navy who are interested are urged to submit their names to the following address:

The Director, Ninth U. S. Civil Service Region, New Federal Building, St. Lonis 1, Missouri, Attention Regional Medical Officer.

MOORMAN RETIRES AS HEAD OF OKLAHOMA COUNTY HEALTH ASSOCIATION

Lewis J. Moorman, M.D., Editor of the Journal of the Oklahoma State Medical Association, recently stepped out of a job at which he had been working energetically for the past 29 years. In voluntarily retiring from the leadership of the Oklahoma County Health Association, he surrendered his title as President of that organization, and assumed a new title created especially for him in recognition of his long years of service to the Association, that of "Honorary President for Life."

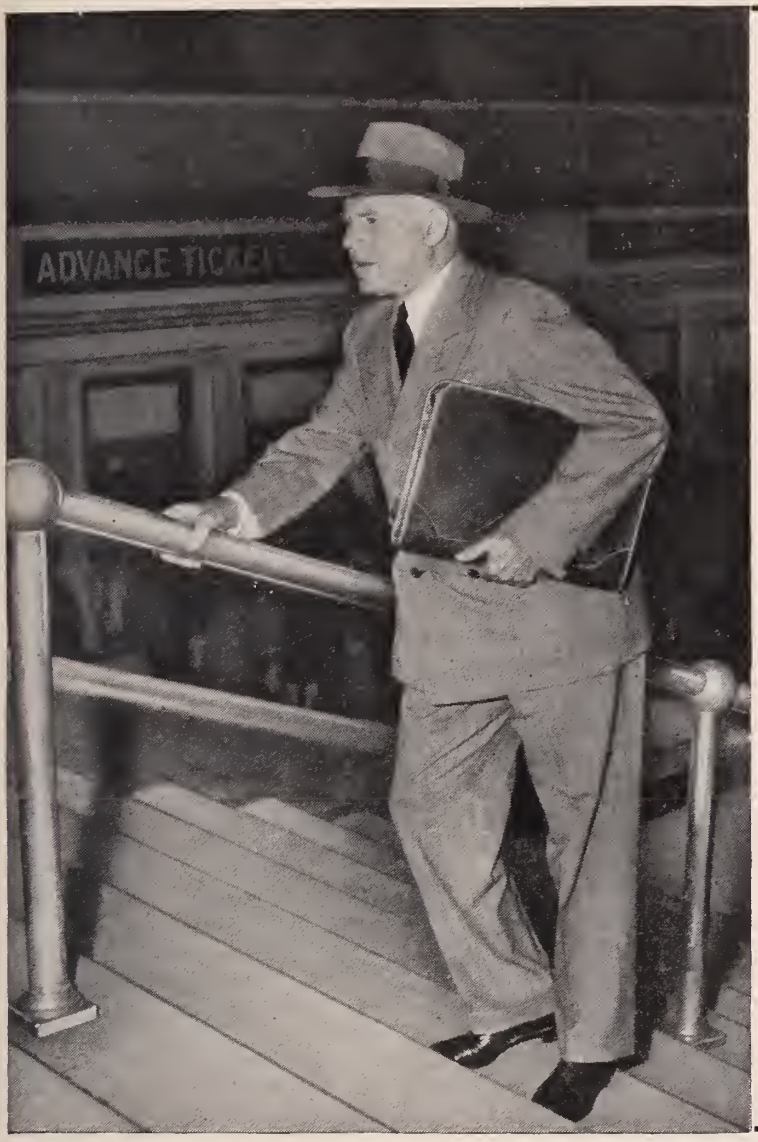
It was in 1918 that Dr. Moorman assisted in the organization of the Oklahoma City Tuberculosis Society and was elected its first president. In 1939 this organization expanded its activities to become the Oklahoma County Tuberculosis and Health Association, and in 1943 it became known as the Oklahoma County Health Association. During this time Dr. Moorman remained as the head of the organization. He also served as Dean of the School of Medicine from 1931 to 1935, and is a past president of the National Tuberculosis Association, the American Trudean Society, and the Southern Medical Association.

At the annual election meeting of the Oklahoma County Health Association held February 20, 1947, Dr. W. H. Miles, Oklahoma City Health Director for the past 23 years, was chosen as the new president to succeed Dr. Moorman.

DRIVE TO ENROLL STUDENT NURSES BEGINS

The acute shortage of nurses throughout the Nation, of such great importance to over worked physicians and nnder-staffed hospitals, will be the objective of a campaign to be carried on during 1947 by the American Hospital Association, according to John H. Hayes, Association President. The Association will conduct an intensified student nurse enrollment program, and invites the cooperation of other agencies, including the American Medical Association, the American College of Surgeons, and the American Nurses Association. The Hospital Association has been granted an expenditure of $10,000 for this campaign, and hospital schools of nursing and other organizations affected by the shortage of nurses are being asked to contribnte financial help.

In addition to making direct aids to hospital schools of nursing, the Hospital Association staff will offer consnltation services to interested agencies on methods of nnrse recruitment, including outlines for speeches for high school recruiting, establishment of scholarships, nursing school literature, and preparation of press releases. A kit of publicity materials for individual hospital nse, special letters and bulletins, and other recruitment aids will be prepared by the Association. On a national basis, radio, newspaper, and magazine publicity has been assnred beginning March 10. Chairman of the American Hospital Association Committee directing the drive is Miss Mildred Riese, R.N., administrator of the Children's Hospital of Michigan, Detroit. For further information write the American Hospital Association, 18 E. Division St., Chicago 10, Ill.



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and other Manifestations of

CORONARY INSUFFICIENCY

The following episodes may be prevented by appropriately regulated administration of a vasodilator having a *sustained* effect:

FOR THE PERSON

- *who is compelled to stop and rest when climbing a flight of stairs.*
- *who suffers "indigestion" and "gas" on exertion, or after a heavy meal.*
- *who is stricken with precordial pain on unusual exertion or emotion, or when exposed to cold.*

The vasodilatation produced by Erythrol Tetranitrate Merck begins 15 to 20 minutes after administration, and lasts from 3 to 4 hours.

It is generally agreed that the acute attack of anginal pain is most readily relieved by the prompt removal of the provocative factor, and by the use of nitrites. For prophylactic purposes—to control anticipated paroxysms—the delayed but prolonged action *of erythrol tetranitrate is effective. Erythrol tetranitrate, because of its slower* and more prolonged *action, is also considered preferable for the purpose of preventing nocturnal attacks.*

ERYTHROL TETRANITRATE
MERCK
(ERYTHRITYL TETRANITRATE)

Council ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION *Accepted*

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Manufacturing Chemists

MERCK MERCK MERCK

NEWS

NATIONAL OPTICAL COMPANY WITHDRAWS FROM STATE

The National Optical Stores Company, a Chicago firm which operates optical stores in a number of states and which has been the subject of complaints to Better Business Bureaus in many cities, recently closed their stores in several Oklahoma towns and withdrew from the State. The action followed a court fight between the company and the State Attorney General's office, and the conviction of the physician who acted as examiner for the company by the State Medical Board of Examiners on charges of aiding and abetting a corporation to practice optometry and medicine and using cappers and steerers. Investigation disclosed that the company advertised glasses for $3.45 but nearly always obtained much higher prices.

The company attempted unsuccessfully to open a branch store in Oklahoma City eight years ago but was refused advertising privileges with local newspapers on the basis of Better Business Bureau reports of consumer complaints in states in which the firm operated. The firm has also withdrawn from a number of other states in which it has encountered difficulties.

When the company returned to Oklahoma last year and opened stores in several small towns, the Better Business Bureau received many inquiries and an investigation was begun by the State Attorney General and the Oklahoma Board of Examiners in Optometry. The company then brought suit in federal court asking an injunction against the Attorney General and the Optometry Board to prevent further interference with their business. Federal Judge Bower Broaddus on August 12, 1946, handed down a decision refusing the injunction. The company's stores were then closed with the exception of the one in Ada which also was closed following the action of the State Medical Board of Examiners.

Bureau files disclosed that various members of the Ritholz family who operate the National Optical Stores Company were named respondents in a complaint issued by the Federal Trade Commission charging false, misleading, and deceptive representations in advertising. The complaint charges among other things the false representation that the eye glasses they sell at so-called "reduced" prices will correct defective vision in all cases, and that the advertisements failed to reveal the harmful effect which may result from wearing the advertised glasses.

According to the complaint, the only purpose of the respondent's advertisements is to attract customers to their stores where prospective purchasers are advised that the advertised glasses are unsuited for their particular eye conditions, and then by means of misleading statements, sell them glasses at much higher prices. Often the glasses sold under such representations are the same or practically the same as those offered by the terms of the advertisement but at many times the advertised price, according to the Commission.

The Oklahoma Board of Examiners in Optometry, the Medical Board of Examiners, and the Attorney General's office are to be commended for their prompt action to secure compliance with the optical and medical laws which were enacted for the protection of the public.—(From *Better Business Bureau Bulletin* of March 7, 1947.)

HAVE YOU HEARD

Two Bartlesville physicians, *Dr. J. G. Smith* and *Dr. J. V. Athey*, have established a record of 24 years continuous play in the YMCA volleyball class and leagues, and have played almost 20,000 games of the fast-moving sport during this time.

The new Edmond Hospital was opened February 19 by *Drs. D. H. Fleetwood, N. F. Wynn* and *R. R. McCoy.*

Dr. V. D. Herrington recently announced his retirement from practice in Pryor. His immediate plans are to attend a New York school in the field of neuropsychiatry prior to locating in another section of the country.

Dr. Jonah Nichols, Durant, has retired from practice and plans to make his home in Gulfport, Miss.

Dr. H. E. Huston has presented his entire library of medical and surgical books to the Cherokee City-County Library. The gift includes volumes collected over a period of years and is valued at $6,000.00.

More and more physicians are returning from the armed services to take up the private practice of medicine in Oklahoma, or for other reasons are locating in our State. The following doctors have recently opened new offices:

Dr. Chester Seba (OU Med '38) has opened offices at 1204 N. Hudson, Oklahoma City, and will establish a practice in general medicine and surgery. *Dr. Paul Marasco*, a graduate of the Medical School of St. Louis University, has joined the staff of the Valley View Hospital, Ada. *Dr. O. W. Davis* (OU Med) recently discharged from the Army Medical Corps, has returned to Cushing to practice general medicine. *Dr. Houck E. Bolton* (OU Med) has established offices in Altus and will engage in the practice of general medicine and surgery. *Dr. E. Stanley Berger* (OU Med '44) recently discharged from the Army, has established offices in Lawton and will specialize in internal medicine and pediatrics. *Drs. A. W. Truman, Ethel M. Walker,* and *F. E. Bates* have purchased a hospital in Ardmore and opened branch offices in the rear of the Hooper Pharmacy in Ringling. *Dr. Hillard Denyer* (OU Med '41) has begun practice at Bartlesville. Following his discharge from the Army with the rank of lieutenant colonel, Dr. Denyer was resident physician at the Wesley Hospital in Oklahoma City. *Dr. R. O. Smith* has returned to Hominy to practice medicine.

AMERICAN COLLEGE OF CHEST PHYSICIANS WILL MEET

The Thirteenth Annual Meeting of the American College of Chest Physicians will be held at the Ambassador Hotel, Atlantic City, New Jersey, June 5 to 8. Applicants for Fellowship in the College planning to take the oral and written examinations on the first day of the meeting, June 5, should write at once to the Executive Secretary, American College of Chest Physicians, 500 N. Dearborn St., Chicago 10, Ill. The Convocation for new Fellows and Life Members of the College will be held on Sunday, June 8.

Must

INCREASED IRRITATION

follow

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PEOPLE are smoking heavily . . . far more than ever before. To *minimize* nose and throat irritation due to smoking, may we suggest the cigarette *proved** definitely and measurably less irritating . . . PHILIP MORRIS.

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**Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60; Proc. Soc. Exp. Biol. and Med., 1934, 32, 241; N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592.*



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OBITUARIES

Walter Logan Stephenson, M.D.
1876-1947

Walter Logan Stephenson, M.D., of Aline, died February 25, 1947, in an Oklahoma City hospital following an illness of two months. Born at Cooper, Texas, on May 7, 1876, he received his medical education at the University of the South, Sewannee, Tennessee, and came to Oklahoma as a pioneer physician in 1906. For 20 years Dr. Stephenson practiced at Henryetta, and in 1937 he moved to Aline, where he resided continuously until his death.

Survivors are his wife; a daughter, Mrs. Geraldyne Spurgeon of Aline; three sons, Dr. Ishmael F. Stephenson of Alva, Orville Stephenson of Canadian, Texas, and Carroll Stephenson of Colorado Springs, Colorado; and a brother, H. D. Stephenson of Klondike, Texas.

M. D. Carnell, M.D.
187(?)-1947

M. D. Carnell, M.D., of Okmulgee, died February 22, 1947, at the Mayo Clinic, Rochester, Minnesota, of a heart ailment. Following his graduation from the University of Nashville in 1908, Dr. Carnell came to Sallisaw, Oklahoma, where he practiced medicine until 1917, when he moved to Okmulgee. From February 19, 1936, to March 24, 1939, Dr. Carnell served as Superintendent of Health for Okmulgee County. Previously, he had served three years as Sequoyah County Health Officer.

Survivors include his wife and a son, Marshall D. Carnell, Jr., both of Okmulgee.

William H. Cantrell, M.D.
1915-1947

William H. Cantrell, M.D., of Oklahoma City, died March 8, 1947, at his home. Death was attributed to a heart attack. Born at Sadler, Texas, on January 1, 1915, he was graduated from the University of Oklahoma School of Medicine in 1940 and served his hospital internship at Fitkin Memorial Hospital, Neptune, N. J. After serving as a captain in the Army Air Corps, Dr. Cantrell practiced in Texas, moving to Oklahoma City in January, 1946. Since December he had been resident physician at Will Rogers Field. Survivors include his wife and two daughters, Caroline Kay, 6, and Christanna, 4, and his father, Dr. E. L. Cantrell, professor of psychology at the Central State Teachers College at Edmond.

Charles Orson Gose, M.D.
1867-1947

Charles Orson Gose, M.D., of Hennessey, died March 8, 1947, in an Oklahoma City hospital following an illness of some months. His death ended almost a half-century of service to the Hennessey community. Born in Pleasantville, Iowa, December 10, 1867, he received his medical education at Keokuk Medical College and in 1900 located in Hennessey, where he practiced actively until his retirement a year ago. Dr. Gose served as director of the Farmers and Merchants National Bank and was a member of the Lions Club and the Masonic Order. Survivors include a daughter, Mrs. Inez Gose Lee of Oklahoma City; a sister, Mrs. B. F. Heiny of Denver, Colo.; two grandchildren; and two great-grandchildren. In place of the customary floral offerings, his friends were asked to donate to the Dr. C. O. Gose memorial cancer fund.

MEDICAL SCHOOL

CALENDAR — APRIL, 1947

SURGICAL PATHOLOGIC CONFERENCES — Each Tuesday 12:00 Noon to 1:00 P.M.

MEDICAL CONFERENCES — Each Wednesday, 9:00 A.M. to 10:00 A.M.

CLINICAL PATHOLOGIC CONFERENCES — Each Thursday 12:00 Noon to 1:00 P.M.

TUMOR CLINICS — First and Third Tuesdays (April 1 and 15) 8:00 A.M. to 9:00 A.M.

UROLOGIC-PATHOLOGIC CONFERENCE — Second Tuesday (April 8) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING — Second Friday (April 12) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE — Fourth Monday (April 28) 6:45 P.M. to 7:30 P.M.

James Thomas Hearin (Med '45) is Senior Assistant Surgeon stationed at U. S. Public Health Service, Marine Hospital, Baltimore, Maryland.

Dr. J. P. Gray, Dean, was guest speaker at the Annual Meeting of the Oklahoma County Health Association on February 19. Dr. Gray's topic was "Voluntary Health Agencies."

During the past month Dr. H. A. Shoemaker, Assistant Dean, has been visiting the various schools throughout the State interviewing applicants to the Medical School for the coming year. Schools visited thus far are: Phillips University, Enid; Southwestern Institute of Technology, Weatherford; Murray School of Agriculture, Tishomingo; Southeastern State College, Durant; East Central State College, Ada; and Oklahoma Baptist University, Shawnee.

On March 1, 1947, Dr. Vernon D. Cushing was appointed Health Service Physician and Assistant Director of the Out-Patient Department. Dr. Cushing will be directly responsible for the health service for the School of Medicine, School of Nursing and Hospitals.

Dr. J. P. Gray, Dean, and Dr. H. A. Shoemaker, Assistant Dean, attended the American Congress on Medical Education and Licensure in Chicago, February 10 and 11.

Miss Jeneal Villet, Research Technician, Department of Biochemistry, and Claude F. Foster, Jr., Junior medical student, were married at the Crown Heights Christian Church on the evening of March 8.

Dr. G. L. Cross, President of the University of Oklahoma, recently received an interesting letter from Dr. Bertha M. Baltazar (Med '27) of 40-D Jones Avenue, Cebu City, Cebu, Philippine Islands. Dr. Baltazar requested a copy of her certificate for her medical degree, which was lost in the evacuation to the mountains during the Japanese occupation. During the war, Dr. Baltazar was of medical service to the guerilla forces in the Philippines. She was furnished with the requested certificate, as well as a class picture of her graduation class and a copy of the 1946 Year Book of the School of Medicine.



Eminent critic dietary dub!

At meal time his renowned judgment deserts him. Eating only the food he likes, a choice of notably limited range, he thrice daily produces a burlesque on proper nutrition. Inevitably, this perennial first-nighter makes his entrance into some physician's reception room—the victim of a self-made, borderline vitamin deficiency. In the same cast, you will find other familiar types. Included in it are the ignorant and indifferent, people "too busy" to eat properly, those on self-imposed and badly balanced reducing diets, excessive smokers, food faddists and alcoholics, to name a few. First thought in such cases is dietary reform, of course. Along with that, a dependable vitamin supplement may well be in order. When you prescribe an *Abbott* vitamin product, you are assured that the patient will receive the full vitamin potencies intended. Your pharmacy carries a complete line of Abbott vitamin products in a variety of dosage forms and package sizes, and will be pleased to fill your prescriptions. ABBOTT LABORATORIES, NORTH CHICAGO, ILLINOIS.

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MEDICAL ABSTRACTS

PREGLAUCOMA. Harry S. Gradle. American Journal of Ophthalmology. Volume 29, pp. 520-523. May, 1946.

The term preglaucoma designates a condition in which an ocular hypertension may be expected to develop in the course of time. Two forms of ocular hypertension can be foretold from the preglaucomatous condition: 1) the acute, shallow-angle type with the manifestations of acute decompensation, and 2) the chronic, deep-angle type with insidious onset. In both types the preventive treatment as well as the prognosis is different.

The first type of preglaucoma is rather typical, and it is greatly revealed by the history of the patient. There are prodromal attacks of acute hypertension, lasting from one-half to 3-4 hours. The pain usually develops after an emotional or physical disturbance or after a stay of 15 minutes in the dark. There may be occasional halo vision, decreased visual acuity, moderate injection of the eyeball, gastric disturbances, or partial shock with spontaneous recovery.

Such preglaucomateous attacks are not very frequent, but there are other possible signs such as headaches appearing regularly when staying 10-15 minutes in a dark room (e.g., in a cinema), slight decrease in dark adaptation. The patient is usually between 45 and 70 year of age. He most likely does not have a myopic eye because myopia is almost a protection against a possible blockage of the trabeculum by the root of the iris; in a myopic eye the angle of the anterior chamber is wider. On the other hand, there are certain types of irides that can easily block the chamber angle when the pupil becomes dilated beyond a certain degree. The increase in the antero-posterior thickness of the iris root may be so large at that point that the chamber angle is blocked, and an acute rise in the intraocular pressure results.

Previous preglaucomatous attacks may be also revealed by several objective signs. Of these the first is a slight irregular dilatation of the pupil, usually upward; it involves about one quarter of the periphery. The second is a partial sector-shaped disappearance of the chromatophores in the iridian stroma, resulting in a limited area of light decoloration. All these subjective symptoms and objective signs call for a careful examination of the eye as to the possibility of later glaucoma. Provocative tests may be also employed to ascertain the diagnosis, though they may be rather dangerous in certain types of eyes.

If it could be decided that a patient is in the acute type of preglaucomatous stage, preventive measures are in order. These include preventive surgery, e.g., a peripheral iridectomy by which at least 25 degrees of the entire chamber angle should be freed in both eyes. If there have been no prodromal attacks or if the chamber angle is not an acute one, the use of miotics may be adequate to prevent an acute hypertensive attacks. One per cent pilocarpin should be instilled in both eyes at bedtime, also before going to a cinema.

In the chronic type of preglaucomatous stage the diagnosis is more difficult in absence of acute attacks and headaches. There may be decreased dark adaptation as well as a history of glaucoma in the family. Chronic glaucoma may occur at any time during the life of a person, even in youth. Otherwise there is very little objective sign, and almost no subjective complaint. Here, the use of provocative tests is essential. The inevitable development of chronic glaucoma is retarded by the use of miotics.—M.D.H.

THE PATHOGENESIS OF POSTABORTAL PERITONITIS. H. C. Falk and G. Blinick. Am. J. Obst., 1945, 50:168.

In this series of 61 cases of postabortal peritonitis, all patients presented an endometritis of varying severity. The infection spread from the endometrium to the peritoneum as a result of direct extension through (1) the tubes, (2) the parametrium, (3) the myometrium, and (4) a combination of these routes.

Direct extension through the tubes seemed to be the pathway of infection in 40 or 66 per cent of the cases studied. Extension of the infection from a parametritis to the peritoneum occurred in six, or 10 per cent, of the patients. In one patient the peritonitis was caused by rupture of a broad ligament abscess into the peritoneal cavity.

The infection extended through the myometrium in four, or 7 per cent, of the cases. In six patients, endometritis, salpingitis, parametritis, and peritonitis were present. The pathway of infection was not clear.

In four patients, endometritis, abscess of the myometrium, salpingitis, and peritonitis occurred. It is probable that in this group the tubes were the chief pathways of extension, as the myometrium contained discrete abscesses with no continuous inflammation of the enveloping peritoneum. The cases are not included in the first group because of the questionable etiology of the peritonitis.

Ovarian abscess was found 17 times, an incidence of 28 per cent. Thrombophlebitis of the uterine or ovarian veins, or of both, occurred in 20, or 33 per cent, of all the patients observed. It was more common in patients with parametritis or myometritis alone or in combination than in those with salpingitis alone. Of 40 patients with salpingitis and peritonitis, 10 showed phlebitis, whereas in the 20 cases with parametritis, myometritis, and peritonitis, 10 showed venous inflammation. In 15 of the 20 patients there was localized thrombophlebitis. In five, embolic abscesses of the lungs were present. No other sites of embolization were found despite careful study.

In this series the most common pathway of infection to the peritoneum was by direct extension through the tubes.—G.P.

SURGICAL CORRECTION OF NASAL DEFORMITIES. Louis T. Byars. Surgery, Gynecology, and Obstetrics. Vol. 84, No. 1, Jan. 1947, pp. 65-78.

In this article the writer has given an excellent summary of the basic principles of surgical treatment of nasal deformities. He reviews the anatomy and physiology of the nose. Discussion of common deformities is given, richly illustrated with diagrams and photographs. Although this article is written on a specialized subject it should have an appeal to the man doing general work because it answers many common questions arising in everyday practice.—J.F.B.

KEY TO ABSTRACTORS

M.D.H. Marvin D. Henley, M.D.

G.P. Grider Penick, M.D.

J.F.B. John F. Burton, M.D.

Men and Amino Acids

Max Bergmann may be said to have inherited the mantle of Emil Fischer, whose principal collaborator he was at the time of the latter's death in 1919. He became Director of the Kaiser Wilhelm Institut für Lederforschung and, later, Member of the Rockefeller Institute for Medical Research. In 1925 he identified the dehydropeptides, substances of physiological interest which serve as substrates for a highly specific enzyme system. His "carbobenzoxy method", announced in 1932, provided a new, elegant technique for the synthesis of peptides. This led to the proposal of a system for step-by-step degradation of polypeptides, permitting successive removal and identification of individual amino acids. His investigations on protein structure and the specificity of proteolytic enzymes fostered the development of finer, more precise methods of amino acid analysis. Bergmann's more than 300 published papers contributed brilliantly to modern protein and carbohydrate chemistry, which are part of the foundation on which medical science rests.



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OFFICERS OF COUNTY SOCIETIES, 1947

COUNTY	PRESIDENT	SECRETARY	MEETING TIME
Alfalfa	L. R. Kirby, Cherokee	L. T. Lancaster, Cherokee	Last Tues. each Second Month
Atoka-Bryan-Coal-Johnston	J. S. Fulton, Atoka	A. T. Baker, Durant	
Beckham	O. C. Standifer, Elk City	J. E. Levick, Elk City	Second Tuesday
Blaine	Fred Perry, Okeene	Virginia Curtin, Watonga	Third Thursday
Caddo	George W. Conover, Jr., Anadarko	Edward T. Cook, Jr., Anadarko	Third Thursday
Canadian	G. L. Goodman, Yukon	Jack W. Myers, El Reno	Subject to Call
Carter	J. M. Gordon, Ardmore	C. D. Cunningham, Ardmore	Second Tuesday
Cherokee	P. H. Medearis, Tahlequah	R. K. McIntosh, Jr., Tahlequah	First Tuesday
Choctaw-McCurtain-Pushmataha	Reed Wolfe, Hugo	Fred D. Switzer, Hugo	
Cleveland	Orville Woodson, Norman	T. A. Ragan, Norman	Thursday nights
Comanche	Leslie T. Hamm, Lawton	Byron W. Aycock, Lawton	Third Tuesday
Cotton	G. W. Baker, Walters	Mollie Scism, Walters	Third Friday
Craig	P. L. Hayes, Vinita	J. M. McMillan, Vinita	
Creek	O. H. Cowart, Bristow	F. H. Sisler, Jr., Bristow	Second Tuesday
Custer	Willard H. Smith, Clinton	D. W. McCauley, Clinton	Third Thursday
Garfield	Francis M Duffy, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	Thomas F. Gross, Lindsay	John R. Callaway, Pauls Valley	Wednesday before Third Thursday
Grady	R. R. Coates, Chickasha	Wesley W. Davis, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	F. P. Robinson, Pond Creek	
Greer	Dwight D. Pierson, Mangum	J. B. Hollis, Mangum	
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis	First Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams McCurtain	
Hughes	Clyde Kernck, Holdenville	H. V. Schaff, Holdenville	First Friday
Jackson	E. W. Mabry, Altus	J. P. Irby, Altus	Last Monday
Jefferson	J. A. Dillard, Waurika	O. J. Hagg, Waurika	Second Monday
Kay-Noble	E. C. Mohler, Ponca City	Edwin Yeary, Ponca City	Second Thursday
Kingfisher	John R. Taylor, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	J. Wm. Finch, Hobart	R. F. Shriner, Jr., Hobart	
LeFlore	John H. Harvey, Heavener	Rush L. Wright, Poteau	
Lincoln	J. S. Rollins, Prague	Ned Burleson, Prague	First Wednesday
Logan	James Petty, Guthrie	J. E. Souter, Guthrie	Last Tuesday
Mayes	E. H. Werling, Pryor	Paul B. Cameron, Pryor	
McClain	I. N. Kolb, Blanchard	W. C. McCurdy, Jr., Purcell	
McIntosh	F. R. First, Sr., Checotah	W. A. Tolleson, Eufaula	Third Thursday
Muskogee-Sequoyah-Wagoner	W. P. Fite, Muskogee	William N. Weaver, Muskogee	First Tuesday
Okfuskee	L. J. Spickard, Okemah	M. L. Whitney, Okemah	
Oklahoma	F. Redding Hood, Oklahoma City	George E. Kimball, Oklahoma City	Fouth Tuesday
Okmulgee	John Cotteral, Henryetta	C. E. Smith, Henryetta	Fourth Tuesday
Osage	R. O. Smith, Hominy	Gayfree Ellison, Pawhuska	Second Monday
Ottawa	B. Wright Shelton, Miami	W. Jackson Sayles, Miami	Third Monday
Pawnee-Payne	C. H. Haddox, Pawnee	C. W. Moore, Stillwater	Second Thursday
Pittsburg	Homer C. Wheeler, McAlester	Edward D. Greenberger, McAlester	Third Friday
Pontotoc-Murray	E. D. Padberg, Ada	Ollie McBride, Ada	First Wednesday
Pottawatomie	Charles F. Paramore, Shawnee	Clinton Gallaher, Shawnee	First and Third Saturday
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	
Seminole	Claude B. Knight, Wewoka	Mack I. Shanholtz, Wewoka	
Stephens	Everett King, Duncan	Fred L. Patterson, Duncan	Third Wednesday
Texas	Daniel S. Lee, Guymon	E. L. Buford, Guymon	Third Wednesday
Tillman	G. A. Tallant, Frederick	O. G. Bacon, Frederick	
Tulsa	E. O. Johnson, Tulsa	John E. McDonald, Tulsa	
Washington Nowata	Thomas Wells, Bartlesville	L. B. Word, Bartlesville	Second and Fourth Monday
Washita	A. H. Bungardt, Cordell	Aubrey E. Stowers, Sentinel	Second Wednesday
Woods	C. A. Traverse, Alva	O. E. Templin, Alva	
Woodward	Myron England, Woodward	C. W. Tedrowe, Woodward	Last Tuesday Odd Months Second Thursday Even Months

THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATOIN

EDITORIALS

SHORT-SIGHTED ECONOMY

Holding down the cost of medical education and being parsimonious about the building and maintenance of teaching hospitals represent unobtrusive ways of robbing the people of their rights. Every citizen in the State of Oklahoma has a right to demand medical care equal to the best available anywhere in the United States. At the time the Journal goes to press, indications point to the fact that there is little likelihood that the Medical School and University Hospital will receive the appropriation from the Legislature for which they have asked. If the money appropriated by the Legislature does not meet the needs of the school it must continue in the embarrassing probation status under which it has labored for years and cannot be placed in the category of one of the better medical schools in the land.

We cannot expect the taxpayers of other States to educate doctors for the people of Oklahoma. The University of Oklahoma School of Medicine represents an investment which pays big dividends at home and helps to pay our debt to society throughout the world. Graduates from our own Medical School served with skill and honor in practically every battle-scarred area on land and sea during the late World War. In civil life they are helping to forward medical science in many of the world's leading medical centers. If the citizenry of Oklahoma could figure the material value of the Medical School's contribution to the world they would be justly proud. But the material value is insignificant when compared to spiritual and other human values for which there is no tangible remuneration.

Considering the Medical School's place in the State, it may be said that the people have a right to demand reasonable economy in the administration of the schools and hospitals. On the other hand, strangling the Medical School certainly represents poor business. When the golden eggs cease to appear it will be too late to inquire, "Who is the goose?" The taxpayer reaching down in his pocket might develop a suspicion. Only through the teaching staff of the Medical School can fifty to one hundred thousand people be treated annually without cost for professional services. Conservative estimates show that this free service runs into fabulous sums which must be paid by the people if the school closes.

The school must close or drastically curtail its activities if the requested funds for operation are not made available. When the Medical School closes or drastically curtails its services, the University Hospital must do likewise or it must be staffed through taxation. If the professional services thus secured equal in skill and efficiency those supplied by the teaching staff, the cost will be great.

In the editorial columns of the Journal the destruction of medical schools, foundations, laboratories, and clinical facilities for the teaching of medicine in other countries has been pointed out. Even the qualified teaching personnel in Germany and the invaded countries has been decimated by intimidation, death, and exile.

Recently, before the Medical Society of the District of Columbia, Dr. Frank Lahey of Boston said we must not let the quality of medical instruction deteriorate because we must supply postgraduate medical education to the world. If the medical schools in the United States must assume this responsibility, the State of Oklahoma must at least continue to educate physicians for the people of Oklahoma.

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

A TIMELY TIP

Senior medical students and interns should not overlook the opportunities ahead in general practice. Before entering the marathon for certification in the specialties, every young physician should give serious consideration to the present trends and future possibilities. There are 180,000 licensed physicians in the United States. There are 26,000 certified specialists. At the present rate there will be 36,000 within another decade. If we add the uncertified specialists we will have over 50,000. With 30 per cent of available physicians in the specialties and only 10 to 15 per cent of human ills calling for highly specialized medical attention, would it not be wise to go into general practice where opportunities for success and satisfaction are being multiplied by overcrowding the specialties.

POSTGRADUATE MEDICAL TEACHING

The abstract of the lectures in Gynecology made available to the physicians of Oklahoma reflects great credit upon the Postgraduate Committee and should cause the State Medical Association, the State Health Department, and the administrators of the Commonwealth Fund to swell with pride.

The Bromwell Branch lectures are promoting health and saving life among the women of Oklahoma. The quality of medical practice and the rating of individual physicians in Oklahoma have been materially elevated by the work of the Committee on Postgraduate Teaching. Postgraduate teaching means postgraduate learning.

CANCER MONTH

Having just passed the month of April, designated as Cancer Month, physicians should pause to consider the significance of cancer statistics. The Metropolitan Life Insurance Company's 1946 Report indicates that the cancer death rate per 100,000 population increased from 64.0 in 1900 to 120.3 in 1940.

In the appraisal of this rather shocking increase, physicians must consider two important factors. Of first importance is the fact that the increase in average longevity places many more people in the cancer age level. Of almost equal interest is the increased cancer alertness on the part of both patient and physician. The praiseworthy popular publicity has caused many people to present themselves for examination and greater familiarity with the diagnostic criteria on the part of the physicians has led to the discovery of an increasing number of cases. The hope of cure rests in early diagnosis. Knowledge of this fact is being widely disseminated, consequently the physicians of Oklahoma must be quick to recognize the early symptoms and signs. This state must not lag behind in the recognition and treatment of cancer.

STREPTOMYCIN

The Army report on streptomycin is in line with the findings of those in civilian practice with the assigned duty of testing its therapeutic value and its toxic effects.

Streptomycin is reported as being in the general class with penicillin and "appears effective in appropriate doses against more than half the infective bacterial organisms ordinarily encountered by surgeons." The above is from the Halloran General Hospital report to the Surgeon General's Office. The "specific poisonous effects where given over an extended period" are recognized and attention is called to the fact that bacteria may become resistant to the drug, thus making it appear that it may be used only once with maximum effect within a limited period on the same patient.

It is suggested that its indiscriminate use may cause the drug to lose its value for a specific type of infection during the patient's lifetime. The hope that streptomycin might prove to be an effective means of combating tuberculosis is still held in abeyance: "The Army experience neither confirms nor refutes this [hope] since a much longer series of investigations will be required before there can be any valid conclusions."

Since the Army experience with the drug is the most comprehensive available, the above brief comments should be of value to the general practitioner who eagerly awaits the final verdict. The remaining uncertainty, the possibility of bacteria becoming streptomycin resistant, and the toxic effects should cool his ardor while he waits. At least diagnostic studies should be carefully pursued and indications well established before the drug is employed.

It may be said that streptomycin supplements penicillin and the sulfa preparations. Perhaps its chief function is to combat susceptible Gram-negative organisms. To date its most clearly defined indication is in tularemia.

SCIENTIFIC ARTICLES

THE CARDIAC IN PREGNANCY*

F. REDDING HOOD, M.D., F.A.C.P.
OKLAHOMA CITY, OKLAHOMA

This is a subject which would appear to be limited but actually covers a broad field. Large books have been written on the subject and there are cardiologists who limit their practice to this field alone. Only a few of the many factors involved can be discussed in the time allotted. Because of personal contacts, my impression and beliefs are influenced by those of Dr. Burton E. Hamilton of Boston Lying-In Hospital and will naturally follow closely those of his book, and we could do no better than to accept his definition for a cardiac in pregnancy as being "a woman whose heart may cause death or disability during the pregnancy or puerperium."

The criteria for diagnosis of heart disease make a list that is long and comprehensive. It can be simplified into four main points; that is, we can select our cardiacs if they have (1) cardiac enlargement, (2) diastolic murmur, (3) significant disorders of the heart beat, and (4) signs or histories of heart failures.

Enlargement means myocardial damage and if there can be no doubt about the increase in the size of the heart then there is no doubt as to the presence of cardiac pathology. The heart's size is sometimes difficult to determine and especially so in pregnant women. A diffuse or heaving impulse usually means an enlarged heart; however, extra cardiac factors such as fever, elevated metabolic rates, and other conditions producing an accelerated heart rate, may simulate the impulse as seen in myocardial hypertrophy. In a normal heart, the point of maximum intensity of the impulse, as measured from the midsternal line, should not exceed one-half the length of a horizonal line measured from the middle of the suprasternal notch to a point even with the clavicular scapular junction. An impulse that lies two or more centimeters outside the midsternal line indicates an enlarged heart. In all cases of doubt if the decision as to whether the case is a cardiac or not depends alone on a question of enlargement, then fluoroscopic examination with orthodiagram or x-ray examination should be made.

A diastolic murmur, regardless of its intensity or duration, means cardiac pathology. The specific criteria for diagnosis of valvular lesions is well covered in text books and by the book published on the subject by the New York Heart Association and need not be discussed here. Systolic murmurs may or may not have pathological significance, and Levine, in grading systolic murmurs from one to six, points out that grade one systolic murmurs have no significance; grade two are borderline and may or may not mean pathology; and that grade three through grade six means pathology. In those cases in which there exists a systolic murmur of clinical importance, there is almost always other evidence of pathology. One should possibly never classify a patient as a cardiac if the only evidence is a systolic murmur.

Disorders of the heart beat of clinical significance rarely occur without evidence of heart disease. Our classification of a patient as a cardiac does not depend so much then upon the finding of the arrhythmias. They do call attention to the heart and may lead to the finding of other evidence of cardiac pathology. They are important in placing the patient in the proper classification within the cardiac group and in determination of proper management of the case.

Signs or history of heart failure, like the disorders of the heart beat, accompany other evidence of heart disease. The presence or

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absence of the signs of cardiac failure, and the past history of failure are the most important factors that influence decision regarding the cardiac in pregnancy. The distinguishing criteria between the favorable and unfavorable cardiacs depends upon (1) signs or history of heart failure, (2) significant disorders of the heart beat, such as auricular fibrillation, (3) a cardiac with a complicating serious disease such as chronic nephritis, diabetes, tuberculosis, etc.

The load of pregnancy, as worked out by Hamilton and his co-workers, shows a slight rise during the second trimester with a rapid rise beginning toward the last of the fifth month, with a peak load during the sixth, seventh, and eighth months, with a lightening of the load during the ninth month. There is a small rise during delivery with a fall during the puerperium. It is then, during the sixth, seventh, and eighth months, that most cases will fail. Should they fail before the sixth month, the chance of failure during the period of the peak of the load is great. The load of pregnancy may change rapidly and patients should be watched carefully. A favorable cardiac may become an unfavorable cardiac during this early period, and if interruption is to be considered, action must be taken before the beginning of the sixth month. If a patient is allowed to enter the sixth month as an unfavorable cardiac or becomes an unfavorable cardiac during the sixth, seventh, or eighth months, then no effort should be made to terminate the pregnancy as it will impose an additional load on a heart already overburdened. An effort should be made to carry the patient along towards term when the load is automatically lightened and termination of pregnancy during this time of the peak load should be for extra cardiac factors only.

Congestive failure, which is the sole cause or the contributing cause of death in two-thirds of the fatalities in a series at the Boston Lying-In Hospital, deserves special consideration. There has been a feeling for many years that labor is the test of failure, but observation has shown that heart failure rarely occurs during or following a delivery. If a patient has reached term and has passed through the period of the peak load without apparent failure and then develops congestive failure, then the patient either had heart failure for some time before labor began which was overlooked or there was an added load from causes other than the process of the development or termination of labor.

In any cardiac, there is a load level beyond which congestive failure may take place. This level may change from time to time and is influenced by many factors; that is, a favorable cardiac may become unfavorable by virtue of development of serious arrhythmias and may fail with a lower load level. There is a load on the heart even with conservative living; add to this the even small load in the early month of pregnancy and the heart may fail during the first few month of pregnancy. If the heart is able to compensate for the extra burden, it still may not be able to carry the burden of the peak load. On the other hand it may be able to carry the basic living load and the peak load of pregnancy but fail due to the added burden such as infection, gain in weight, unusual or unnecessary activity, or some of the common removable burdens on the heart. The heart may fail at any time, and I know of no way to accurately foretell the load level beyond which the heart will decompensate. Function tests are unreliable.

One of the principle problems of the cardiologist in a case of pregnancy is the prevention of congestive failure. A thorough, adequate consultation with the patient is necessary, following the complete history and physical examination with necessary laboratory studies, in order that she and her family may understand and appreciate the need for care and precaution beyond that in the usual case of an expectant mother. She should understand that because of the rapidity with which the situation may change, she should report at regular stated intervals and at the onset of any unusual sign or symptom of illness she should go to bed and notify the physician immediately. Activity should be reduced to only that reasonably necessary, making about the same amount of physical effort each day, and she should avoid becoming tired and should not do enough to become short of breath. The development of dyspnea, orthopnea, cough, or blood spitting are causes for immediate reporting for a check up.

A program must be undertaken for the correction of the common, removable, undesirable burdens on the heart. It has long been known that an obese cardiac will show great improvement as the weight is reduced. A woman whose normal weight is 120 pounds and who weighs 150 pounds has 25 per cent more weight than she should and each pound of flesh requires nourishment through circulation which adds to the pumping effort of

the heart. Reduction of the load may more than offset the added load of pregnancy. Many clinics allow only a maximum gain of 15 pounds in pregnancy for any cardiac.

Anemia may cause heart failure, and even mild anemias added to the load in pregnancy may swing the balance and bring on failure. The Boston group has a rule to "be dissatisfied if a cardiac in pregnancy has a red blood count less than 4.5 million per cubic millimeter of blood, or a hemoglobin estimation of less than 80 per cent." This seems to be a good rule to follow.

Other removable or correctible burdens include oral asepsis, psychoneurosis, functional gastro-intestinal disturbance, chronic bronchitis, diabetes, gallbladder disease, peptic ulcer, thyrotoxicosis, etc. All should be removed or corrected insofar as possible.

If congestive heart failure develops, it is of extreme importance that it be recognized early. The pulmonary hypertension, with its possible congestion of the pulmonary blood vessels, may give rise to paroxysmal dyspnea in cases of coronary artery disease, hypertension, or with aortic regurgitation, and is considered left-sided failure, while venus congestion with engorgement of the liver and dependent edema, are evidence of right-sided failure. When one occurs, the other usually follows very quickly, and I feel that it is better to consider them together as congestive heart failure, and the earliest reliable sign of congestive heart failure is persistent rales in the lung bases posteriorly. Diminished vital capacity may indicate early failure but a single reading is of no value and repeated readings in untrained patients without adequate supervision may have no value. Hoover's signs, that is, lagging of the ribs along the insertion of the diaphragm or even retraction at the end of full inspiration, is helpful in nonpregnant patients but may be present in noncardiac pregnant patients due to the extra tension on the diaphragm. Cough and breathlessness with usual activity may indicate early failure. Hemoptysis, nose bleed, venus congestion, liver enlargement, dependent edema, unusual gain in weight, are later signs which should be watched for.

Treatment of congestive failure in pregnancy is not much different than in other cardiacs. Early recognition is important and the patient should be placed on bed rest. They should be comfortable, with the head elevated sufficient to overcome dyspnea. The back should be straight, and this may be accomplished by raising the head of the bed rather than having the patient propped up in bed. Nursing care to relieve the patient of as much care and exertion is important, if available. Oxygen and sedation have their proper place in securing proper rest.

Control of diet and fluid intake are second only to bed rest in importance. The Korrell diet of 28 ounces of milk in four equal feedings during the first two or three days with no other food or fluid intake has been used for many years and is still a popular method of treatment. Cereal, extra milk, or orange juice may be added later. The fluid intake should be limited to 1500 cc. until compensation is restored. In some severe stubborn cases of cardiac failure, fluids have been entirely withheld for as long as 72 hours. The diet and fluid intake should be controlled for the remainder of her life once a patient has developed congestive failure.

Removal of fluid from the pleural cavity by thoracentesis is advocated, although I feel that the indications for its removal depends on its need for diagnosis and then only on respiratory embarrassment. Venesection may be considered in some cases especially those with left ventricular preponderance and left-sided failure.

Sollis Cohen once wrote that "digitalis is never merely harmless, it is either needed and useful or it is needless and harmful." When symptoms and signs indicate that the heart has failed to function properly as a pumping mechanism, then and only then is digitalis indicated; otherwise it is contraindicated. Certainly, in congestive failure, its use is indicated. It is not indicated merely by the presence of valvular disease or altered rhythm unless signs of failure are present. It stimulates the vagus nerve, slowing conduction, and acts as a protoplasmic poison, has a direct action on the muscle fibres increasing their irritability and contractility hence increasing tone, and it lengthens refraction. In the absence of failure ectopic rhythm may be produced, cardiac output may be lessened, and actual harm may come from its use. There is likewise nothing to be gained from small tonic doses nor the giving of small amounts in the hope of being prepared to digitalize the patient if failure occurs. Once a patient fails and digitalization is obtained, it should be continued at least until after the puerperium. Quinine, which decreases the tone, is not indicated in congestive failure until tone has been restored through the use of the digitalis group and then it is not needed.

The diuretics are a useful adjunct in the treatment of congestive failure and need no discussion here.

From the standpoint of the cardiac patient, conservative obstetrical care is the rule of choice. Since failure seldom begins in labor or in the puerperium interruption after the fifth month and before term is unnecessary and dangerous. Delivery by abdominal surgery has resulted in a high mortality for both mother and baby and should be done only when there are obstetrical indications, and not for cardiac reasons. Delivery should be made as easy as possible, and that we leave to the obstetrician.

Before delivery, most of the complications that arise, except for infection, especially respiratory infection, are dependent on the cardiac pathology. But after delivery they are nearly all due, not to the heart, but to obstetrical factors. Many may give rise to symptoms suggesting congestive failure such as embolism, surgical shock, massive collapse, sepsis, etc. When congestive failure does appear, one should be careful to determine the severe complication which has produced it. From the cardiac standpoint, the after care consists of diet and fluid control, a minimum of three weeks in bed with a gradual return to her optimum of activity.

The most common problem which the cardiologist is asked to decide is that of interruption of pregnancy or advising against pregnancy. I feel very definitely that any pregnant cardiacs or a cardiac contemplating pregnancy should be completely advised regarding her condition, the hardships she may have to endure, the possible restriction of her activity, the economical and social losses that may be entailed. If she is a favorable cardiac, she should understand that the maternal death rate for favorable cardiacs is 2.5 per cent as against a death rate for all pregnant women of .3 per cent, and that the fetal mortality for this type of case is 17.3 per cent, and should she develop congestive failure that it is 29 per cent. If she is an unfavorable cardiac, she should know that one mother out of each six losses her life, or if she has auricular fibrillation, one out of three will die, and her chances of losing her baby are 44 per cent unless auricular fibrillation is present, then they are 50 per cent. I believe these facts should be made known to the patient and her family; then knowing the risk involved, the decision is her's and not the concern of the physician. Should she wish to face the risk of pregnancy, then we, as cardiologist and obstetrician, must aid and guide her to the best of our ability.

CHRONIC RHINITIS*

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To the most recent of those repulsive minor medical bugbears in which the American public delights has been given an equally repulsive name, "postnasal drip." It brings up the rear of quite a procession of fearsome public enemies: halitosis, barber's itch, pyorrhea, "strep" throat, "athlete's foot," and some others. So states Dr. Proetz regarding a disagreeable symptom that brings many patients to see the otolaryngologist.

The above is one of the almost constant symptoms along with nasal obstruction which bring the patient with chronic rhinitis to the doctor to seek relief. Nasal obstruction is almost constantly present, varying from partial permeability to complete closure of the nasal chambers. Nasal obstruction constitutes a very annoying symptom; this is especially true at night. The obstruction alternates from side to side, ofttimes changing rapidly without apparent cause. Mouth breathing at night is frequently complained of, which results in extreme dryness of the mouth and throat. Other symptoms frequently mentioned are tinnitus and a sense of fullness in the ears, with a slight loss of hearing in some individuals; sensations of fullness about the forehead with intermittent attacks of pain over the frontal sinus area; cough and constant clearing of the throat due to the presence of secretion in the throat.

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Due to the fact that all too frequently many otolaryngologists tend to belittle or ignore these almost constant and worrisome complaints in chronic rhinitis, and the frequency with which these patients tend to elevate their symptoms into the realm of a serious illness and demand relief, it behooves us to attempt a rationalization of the etiology and treatment of this common condition. We feel that more consideration should be given to these patients.

Suffice it to say that chronic rhinitis is a very common disorder. It has been classified as vasomotor, common intumescent, allergic, hypertrophic, and hyperplastic rhinitis.

The nasal mucous membrane lines the nasal cavities. From the nasal cavities its continuity can be traced to the conjunctiva through the nasal-lacrimal ducts, and with the frontal, ethmoidal, sphenoidal, and maxillary sinuses through their numerous meati. The mucous membrane of the nose and sinuses is a specialized tissue, a pseudostratified ciliated columnar epithelium. Normal respiratory membrane does not exist after the first few months of life, since low grade inflammatory changes are always present. The turbinates are covered by typical respiratory epithelium which consists of a layer of pseudostratified ciliated columnar cells resting on a single layer of basal cells. The inferior turbinate possesses a large number of cavernous spaces in its stroma, with few glands; the middle and superior turbinates contain many glands and few cavernous spaces. In chronic rhinitis there appears a swelling of the superficial epithelium cells. There is usually an increase, frequently very marked, of the fluid in the tissue spaces with a marked dilatation of the cavernous spaces so numerous in the inferior turbinates. There is also a marked increase in the cellular content of this tissue by an infiltration of lymphocytes, plasma cells, and eosinophiles.

The first step in the management of these cases is a careful history. It is one of the most important aids in deciding what type of treatment is to be used. In the allergic cases the history may show that the symptoms have a seasonal incidence indicating sensitivity to certain pollens. The improvement of symptoms by a change of climate or a vacation away from home are indicative of allergens inhaled from the air. An increase of nasal symptoms accompanied by gastro-intestinal disturbances are suggestive of food allergy. Perennial nasal congestion, usually worse at night and in the early morning, is suggestive of a sensitivity to mattress dust, feathers, cotton, wool, etc., that the patient is in contact with during the night.

When the examination and history indicate an underlying allergy, skin tests should be done. Group testing by the intradermal route has been found very successful with the inhalants. These include the animal danders, common inhalants, and house dust. If the symptoms are seasonal the common pollens are tested for. As skin tests for foods are notoriously inaccurate, we feel those cases suggestive of food sensitivity should be placed on an elimination diet. We use the diets recommended by Rowe, which are essentially wheat, milk, egg-free diets which also eliminate other common food offenders. After ten days if symptoms have improved wheat is added for a week, followed by milk, eggs, and other eliminated foods until an increase in symptoms is noted, usually first manifested by gastro-intestinal disturbances.

In many patients with chronic rhinitis mechanical obstruction to breathing is present in the nose. Obviously this should be corrected if possible. A deviated septum which comes in contact with a hypertrophied middle or superior turbinate may be the cause of the patient's symptoms. Polypi which are obstructive of course should be removed.

Hansel has been able to demonstrate that a large number of cases of chronic rhinitis are due to allergy. However, in a large number of these patients the allergic factor cannot be determined. In those cases, or where allergic management has failed to give the desired relief, many methods of treatment have been recommended. Surgical removal of all or parts of the inferior turbinate has been done. Frequently this is followed by synechiae between the septum and the turbinates; occasionally atrophic rhinitis may be induced. Chemical and electrical cauterization of the turbinates have been used, but destruction of the mucosa with resultant loss of ciliary action makes these methods less acceptable. Various types of sclerosing chemicals have been used, including hypertonic saline solution, glycerin, and alcohol. Necrosis and nerve tissue degeneration are very objectionable aftermaths of these agents.

Fishhof originally described the treatment of vasomotor rhinitis and allied conditions with sodium morrhuate. The technic is as follows: First, thoroughly cleanse the nose. The mucosa is then anesthetized with two per cent pontocaine solution. We feel this is superior to cocaine, first because there are

less systemic reactions, and secondly, shrinking of the tissue is not so pronounced. A strip of cotton or gauze is placed along the floor of the nose to absorb any of the solution which might escape from the turbinate. A number 22 spinal puncture needle on a tuberculin syringe is used. The anterior tip of the inferior turbinate is entered, the needle being kept as close to the periostium as possible, and inserted to the posterior tip of the turbinate. As the needle is slowly withdrawn, ½ cc. of a five per cent solution of sodium morrhuate is injected between the periostium of the turbinate and the mucosa. On withdrawing the needle some bleeding will take place but is usually controlled in two or three minutes by a cotton pack. We have encountered no distressing side effects but patients frequently complain of a slight headache that lasts from one to several hours which is relieved by aspirin. Only one turbinate is injected at one sitting. A week elapses before injecting another turbinate. Two weeks is allowed to elapse before reinjecting a turbinate. We have found in the average patient so treated two injections into the inferior turbinate are usually necessary for relief of symptoms. We have not felt the necessity to inject the middle turbinate in any of our patients. Relief of symptoms begins usually within two weeks after the first injection and continues for four to six weeks, remaining stationary after that time.

CONCLUSIONS

Those patients with chronic rhinitis, so frequently seen by many of us, complaining of nasal obstruction, postnasal secretion, vague headaches, etc., but without any obvious infection, should be investigated thoroughly. Many will be found to be allergic and respond to elimination of or desensitization to the exciting allergens; many others will be helped by injection of the turbinates with sodium morrhuate. The above procedures have seemed to be the most practical solution to this problem.

PILONIDAL CYSTS AND SINUSES*

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During the past few years, considerable interest has been noted in the study and the improvement in treatment of this troublesome condition. Army physicians soon noted that they were confronted with the disease much more often than was customary in civilian life. Training for mechanized warfare was correctly assumed to be the cause, since trauma to the sacrococcygeal area was quite violent and persistent and dormant sinuses frequently became symptomatic, infected, cystic areas. Numerous articles soon appeared in medical literature on various methods of therapy designed to shorten the healing time. It should be observed in interpreting statistics from Army sources on the duration of hospitalization that they most frequently include the time for complete healing. Without doubt, much valuable knowledge was gained in the treatment and certainly it is applicable to civilian practice.

Hodges brought forth the term "pilonidal" in 1880 from "pilus," hair, and "nidus," nest. Many other names have been suggested, such as sacrococcygeal cyst or sinus. A. W. Anderson of Boston reported on this lesion in an article entitled "Hair Extracted from An Ulcer." Johnathan M. Warren of Boston gave an excellent description in 1854, and 13 years later published further experiences. Since then, numerous articles have appeared. Recent studies by Drs. H. B. Stone, S. L. Fox, and M. Gage are particularly valuable.

Pilonidal sinuses are generally conceded to be of congenital origin. Some workers feel that they represent a remnant of the medullary canal due to an abnormality of development in the neural tube. Other workers believe that there is an infolding of surface epithelium in early embryonic life. Pathologically, as the name suggests, a pilonidal cyst is a hair containing dermoid cyst in the sacrococcygeal region. It is situated in the posterior raphe over the coccyx. There may be a sinus opening on a postanal dimple.

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The lesions occur most often in the people of the pituitary type with broad hips and considerable hair. In the white race, males are afflicted three times oftener than females, but the ratio appears to be reversed in the colored races. There is considerable evidence that there is a familial trend, since it is quite common to find more than one member of a family with the condition.

The physician is consulted, as a rule, during the first episode of infection. Frequently, this is the initial indication to the patient that any abnormality exists. Infection is ushered in by pain, swelling, and other evidences of localized sepsis. Due to the depth of the cysts, considerable time elapses before spontaneous drainage occurs and the patient usually seeks relief before this happens. After all the inflammatory process has subsided, the only thing noticeable to the examiner is a small palpable tumor mass and most commonly a small sinus area from which purulent material may be expressed.

The correct surgical management has caused much controversy among competent surgeons. Prior to the war, excision without closure of the wound was probably the method of choice. However, healing took two to three months or longer and this fact caused much discontent among medical men charged with the responsibility of keeping as many soldiers on duty at all times as possible. Consequently, the possibility of primary closure was fully investigated.

The author apologizes for being unable to bring exact figures on a small series of cases that were managed by the methods described herein. Approximately 30 cases were operated with primary closure with excellent results in 70 to 75 per cent. Nothing new was attempted but an effort was made to institute simple, effective management that could be applied to most of the cases. A rather sudden change to a foreign clime interrupted a careful analysis.

Briefly, I would like to mention the various methods of surgical treatment advocated with recent time: (1) Excision without suture (open method); (2) Excision and packing with a sclerosing agent (Heyd); Carnoy-Cutler solution of absolute alcohol 6 cc., chloroform 3 cc., glacial acetic acid 1 cc., and ferric chloride 1 gram is recommended; (3) Partial closure (MacFee and others); (4) Excision by cautery (Rogers); (5) Primary closure by (a.) Simple closing suture, (b.) Use of muscle flaps to close defect, and (c.) Use of various plastic procedures in closing the defects, all of which are designed to lessen tension on the suture line. Lahey's sliding graft and Gage's stellate closures are examples of this.

Cases coming to dispensaries with infection were hospitalized and simple incision and drainage was done. By using hot sitz baths and good wound management, healing was usually complete in two weeks. All of these cases were returned to duty with instructions to report to the dispensary in one month. At that time, all evidence of inflammation was usually absent and only slight tenderness could be elicited. In most cases, a small palpable mass was present representing the cystic area. The patient was again hospitalized and prepared for surgery in the following manner. Full doses of sulfonamides, preferably sulfadiazine, were given for three days prior to surgery. Blood level determinations were made to assure adequate concentration. Daily tub baths were given with instructions to use soap and water abundantly. The bowels were well cleansed before surgery and the patient was given only liquids the day preceding surgery.

The anesthetic of choice was of a low spinal type using 100 to 120 mg. of novocain crystals. It was deemed better not to use a local anesthetic, first because of the potentially infected area and secondly because adequate relaxation was desired. The patient was turned on his face in a moderate jackknife position and the buttocks were spread by using broad bands of adhesive straps fastened to the edge of the buttocks and anchored to the table. The area was then prepared surgically by soap and water followed by alcohol and a mercurial antiseptic.

No dye was injected into the sinus tracts because it was felt that this only caused confusion in distinguishing normal and abnormal tissue. An elliptical incision was made begeinning at a point one to two centimeters above the anus and extending well above the uppermost limits of the cystic area. Every effort was made to conserve skin. In cases of sinus tracts opening lateral in the buttocks, a "cloverleaf" incision was made and the tract removed. Dissection was carefully carried down to the sacrococcygeal ligaments and it was soon noted that it was not difficult to ascertain when the cystic area or a sinus tract was approached due to the color and the consistency of the tissue. Bleeding was carefully controlled, mostly by pressure, so that vision would be unimpaired. This pro-

cess was performed on both sides of the tract and it was removed en masse.

Experience has shown many surgeons that most so-called recurrences are the result of serum collection in a dead space and the resultant defect is not a pilonidal cyst. Therefore, we sought a suture that was nonirritating in order to reduce the amount of serum in the wound. Cotton sutures size 60 for ligation and size 30 for suture were selected. Careful hemostasis was first accomplished. The fatty tissue on each side was then approximated by interrupted cotton stitches and no effort was made to suture this to the ligaments. Coaptation of the wounds was facilitated by medial pressure on the buttocks as the sutures were tied. The skin was also closed with cotton. Realizing that a dead space was left by this manner, a pressure dressing was then made, making a cone shaped dressing out of gauze fluffs. There were bound down by broad bands of adhesive which went around the body, well onto the abdomen.

The patient was permitted to lie on his back or sides. Sulfonamide therapy was continued for three more days. He was kept on a liquid and soft diet and an enema was given on the fourth morning. The dressing was first changed on the tenth day when the skin stitches were removed. The patient was permitted out of bed at that time.

If hyperpyrexia occurred during the postoperative course, the dressing was removed, warm moist dressings applied, and drainage established, if indicated. Most of these cases did not require a complete reopening of the incision and made a nice recovery.

In two cases gross infection occurred and the wound was opened and treated as by the open method. The results by this method were most gratifying. The scars were firm and nontender and no readmittances were encountered for this reason in the short time observation was possible. This method appears to be applicable to most cases and a need for a complicated plastic procedure was not felt.

CONCLUSIONS

1. Pilonidal cysts were encountered frequently in Army medicine due to trauma to the sacrococcygeal area.

2. They are of congenital origin, occurring most often in the pituitary type individual. Familial tendencies do exist.

3. The simple surgical management outlined produced satisfactory results in a small series of cases.

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DISCUSSION

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First, I would like to congratulate Dr. Cordonnier on his excellent presentation of this important subject. The importance of this condition is attested by the fact that some military hospitals have reported that as high as 10 per cent of all the operations that were performed in their hospitals were for the correction of this condition. While we must admit that the trauma of military service undoubtedly aggravated these lesions, we in civilian practice must accept a large portion of the responsibility for failing to adequately treat patients with pilonidal sinuses. Many operations which were formerly done for the correction of these sinuses left much to be desired. This is attested by the fact that so many types of operations have been described for the correction of these sinuses and most of them have left a great deal to be desired and many were not even based on sound surgical principles.

There are several points in Dr. Cordonnier's paper which I feel should be emphasized. First, I believe that everyone will agree that the acute lesions should be treated by adequate drainage and that this should be followed by more extensive surgery at a time when the patient has been properly prepared. Secondly, I believe that everyone now agrees

that primary closure is preferable if it is at all possible.

Certainly Dr. Cordonnier's suggestion that these patients should have preoperative and postoperative sulfonamides is desirable. Possibly the very judicious use of the sulfonamides locally at the operation might have some value. I also believe that the administration of penicillin postoperatively would reduce the incidence of infection and the breaking down of these potentially infected wounds. While there are many cases in which penicillin is not necessary, I can find no contraindication to its use.

I believe that Dr. Cordonnier's choice of spinal anesthesia, if there are no contraindications, is very wise, although more bleeding occurs with this type of anesthetic than when a local anesthetic of novocain and adrenalin is used. However, the repeated punctures with the resulting danger of infection I believe greatly outweigh this advantage. It is always very important in this type of operation that meticulous hemostasis be carried out regardless of the type of anesthetic used.

The choice of cotton suture is wise as it certainly causes less tissue reaction than other suture, with the possible exception of certain metallic sutures which are more uncomfortable to the patient and are more likely to be tied tightly so that the tissue will be cut through, rather than approximated. Most of the cotton which I have used will break if tied too tightly, making it almost impossible to strangulate the tissue in the suture. In using cotton, we must always keep in mind Ochsner's precepts for its use.

In addition to the serum collections which become infected and cause a breaking down of the wound, as Dr. Cordonnier has mentioned, failure of a primary closure is also caused by: (1) the attempted closure of grossly infected tissue too soon after the drainage of the acute suppurative processes and (2) the attempted closure of defects which are too wide, thus causing a cutting of the tissue and a giving away of the suture. The excessive tension may result in a dead space being formed which could become filled with serum, which is an ideal culture medium for the bacteria present. The third cause of a failure might be the incomplete removal of the sinus tract.

Primary closure should not be considered unless the lateral walls can be closed without undue tension and then only if the postsacral fascia remains intact. In this connection, I wonder if it would not be advantageous for the suture which incorporates the deep areolar tissue on both sides to incorporate also a wide portion of this postsacral fascia and thus eliminate the possibility of another dead space.

AMERICAN MEDICAL ASSOCIATION CELEBRATES 100TH BIRTHDAY

The American Medical Association was 100 years old on May 5, 1947. It was on that same day of the month in the year 1847 that delegates to the National Medical Convention met in the hall of the Academy of Natural Sciences in Philadelphia and founded the American Medical Association. The Association, which today has a membership of more than 130,000 physicians will celebrate its founding at the annual session in Atlantic City, June 9, 1913. The program will represent a high point in the assemblages of physicians anywhere in the world.

The centennial session in Atlantic City is expected to attract more than 15,000 physicians. More than 400 medical papers will be read during the five-day meeting, covering such subjects as the antihistamine drugs, infantile paralysis, cancer, the antibiotic drugs — penicillin and streptomycin — and radioactive products in medicine. Several distinguished English medical men have been invited to take part in the scientific meetings.

On Saturday, June 7, the Board of Trustees and officers of the Association will tender a banquet to leaders in the industries and occupations associated with medicine. General Omar Bradley of the Veterans Administration, Washington; Basil O'Connor, New York, chairman of the American Red Cross and president of the National Foundation for Infantile Paralysis, and H. W. Prentis, Jr., president of the Armstrong Cork Company, Lancaster, Pa., will comment on the influence of American medicine on the Nation's progress.

Oklahoma and Kansas State Medical Associations will have a "Special Train" for state physicians and their wives — deluxe accommodations and choice of two post-convention tours. Those physicians who have not already done so are urged to make reservations now through the Rainbow Travel Service, First National Building, Oklahoma City, Mr. Harry Kornbaum, Manager.

STAPHYLOCOCCUS ULCER OF THE CORNEA

WERNER W. MALL, M.D.
PONCA CITY, OKLAHOMA

The patient was a male, age 39, injured March 16, 1945. While the patient was loading pipe some rust flew in his right eye. The foreign body was removed from the cornea in the usual manner about three hours following the injury.

At the time of the removal there was a denudation of the cornea over an area about two millimeters in diameter surrounding the foreign body. He was placed on 10 per cent argyrol and sulfathiazole ophthalmic ointment. On the following day, March 17, the denuded area continued to spread and the patient was having considerable pain. He was placed on sulfanilamide by mouth and pontocaine ophthalmic ointment for pain, as well as morphine by mouth, and the pupil was dilated. The following day he had the beginning of a definite ulcer with iritis and iridocyclitis. A smear and culture taken at this time showed Staphylococcus albus. The ulcer was cauterized with an iodine preparation. The following day, March 19, the ulcer was continuing to spread and the cauterization was repeated. In addition, penicillin drops were employed every two hours, penicillin ointment not being available at the time. The patient was given 40 million mixed typhoid bacteria intravenously. On March 20, the ulcer was scraped and cauterized with trichloracetic acid.

On March 21, the scraping was repeated and followed by cauterization. Fifty-five million mixed typhoid bacteria were given intravenously. On March 22, cauterization was repeated because the ulcer was still spreading. Urinary retention developed and the sulfanilamide was discontinued. The patient was placed on sodium salicylates with full dosage of multiple vitamin tablets. On March 23, the ulcer had spread to seven millimeters in diameter and again it was cauterized and 1,000 units of vitamin C were given intravenously. On March 24, the ulcer had spread to eight millimeters in diameter. He was given 65,000 mixed typhoid bacteria intravenously and placed on 20,000 units of penicillin every three hours, intramuscularly. In view of the unsatisfactory progress, the Thermophore was applied to the ulcer for one minute at 135 degrees Fahrenheit under 10 per cent cocaine. Vitamin A drops were used in the eye. Intravenous anesthesia was found to be much more satisfactory, as the application is very painful under local anesthesia. By the following day the ulcer showed a definite healing of one and one-half millimeters around the entire margin of the ulcer, and within the next 24 hours, one-third of the ulcer had healed.

Two days later, March 28, the ulcer flared up and began spreading through the healed area. Again the Thermophore was applied for one minute at 135 degrees Fahrenheit. Within 24 hours the ulcer again showed definite signs of healing and continued to do so until on April 3, when it had entirely healed, except for two millimeters in the center. On April 5, the ulcer again began spreading and it was cauterized with the iodine preparation. However, by the following day there was evidence of a further spread through the healed area with marked increase of subjective symptoms. The ulcer was scraped and smears and cultures were made. Again the Thermophore was applied. At this time both the smear and the culture were negative. General medication was continued as previously described. On April 7, the patient was given a series of 10 cc. whole boiled milk intramuscularly every other day for three injections. The vitamin drops and the argyrol drops were discontinued and neoprontosil drops employed.

*Presented before the Section on Eye, Ear, Nose, and Throat at the Annual Meeting, Oklahoma State Medical Association, May 3, 1946.

On April 9, liver extract with vitamin B_1 was given because of a reduction in the red blood count to four million with an 80 per cent hemoglobin and general malaise. Ultraviolet ray, ten millimeters distant, was applied for 30 seconds, increasing to one minute the next five days. The ulcer continued to heal slowly with receding symptoms, and the patient was dismissed from the hospital on April 29. At that time the ulcer no longer took any stain and was apparently completely healed.

The patient was then placed on dionyn drops with optochin hydrochloride and given light doses of ultraviolet in an attempt to absorb as much of the scar as possible. His vision by May 20 was 20/60, and this continued to improve so that by June 1, he had a vision of 20/40.

He was allowed to return to work on June 4, but was kept under observation and treatment at the office. By June 15, his vision had increased to 20/25, and on a recheck August 15, he had a vision of 20/20 minus 2, and had no difficulty with any of his occupational duties.

In conclusion, it is my opinion that the Thermophore application was the one leading factor in this patient's recovery. It was definitely the only procedure that produced definite healing. The results were obvious within 24 hours after each application.

To further substantiate this conclusion, I would like to mention another case treated in November of 1944. It was an exact duplicate of this case in every respect. In the latter case the Thermophore was not applied for seven weeks following the injury, although the patient was placed on the same medication as in the case just presented. Not until the Thermophore was employed did this patient show any improvement. The Thermophore was not used until he developed hypopyon in the anterior chamber. The ulcer healed in 15 days following three applications of the Thermophore. With the same treatment for absorption of the scar, his vision four months later was 20/100; and with continuation of treatment, his vision finally improved to 20/60. Had the Thermophore been used earlier in this case, it is most probable that loss of vision would have been less. It is my opinion that we have a probable tendency to rely too much on our newer drugs and tend to neglect some of the more radical surgical and semi-surgical procedures which proved beneficial in the past. The fundamental principle of treatment has not changed, but we do have the great advantage of the tremendous aid our new drugs have given us in hastening the recovery of our patients.

MEET OUR CONTRIBUTORS

Ralph W. Rucker, M.D., of Bartlesville, is the author of "Chronic Rhinitis" published in this issue. A graduate of the University of Oklahoma School of Medicine in 1936, Dr. Rucker received his Oklahoma license in 1937. His practice is limited to EENT. He is a member of the Washingtou-Nowata County Medical Society, the OSMA, aud the A. M. A.

Byron J. Cordonnier, M.D., F.A.C.S., has offices in the Broadway Tower, Enid. He is the author of "Pilouidal Cysts and Sinuses," in this issue. Born in 1906, Dr. Cordonnier was graduated from the University of Oklahoma School of Medicine in 1932. He is a member of the Garfield County Society, the OSMA, and the A. M. A.

Frederick Redding Hood, M.D., F.A.C.P., Oklahoma City, who limits his practice to cardiovascular diseases, is the author of "The Cardiac in Pregnancy." Dr. Hood, au Oklahoma graduate in 1930, is Presideut of the Oklahoma County Medical Society, a member of the OSMA, and a Fellow of the A. M. A.

Werner Walter Mall, M.D., of Ponca City, limits his practice to EENT. He is the author of "Staphylococcus Ulcer of the Cornea: Report of a Case" which is published in this issue of the Jourual. Born in 1905, Dr. Mall was graduated from the University of Nebraska College of Medicine iu 1932 and received his Oklahoma license in 1934. He is a member of the Kay-Noble County Society and the OSMA and is a fellow of the A. M. A.

The Clinical Pathologic Conference reported in this issue was conducted by Dr. Howard C. Hopps, Chairmau of the Department of Pathology at the School of Medicine, and Dr. Paul Merton Vickers, Instructor of Rectal Surgery.

Dr. Hopps was previously associated with the Department of Pathology at the University of Chicago, after being graduated from the University of Oklahoma iu 1937.

Dr. Vickers, previously located in Houston, Texas, was graduated from the University of Minnesota in 1937. In additiou to his positiou on the teaching staff, he is eugaged in private practice of proctology with offices iu the Medical Arts Building in Oklahoma City.

CLINICAL PATHOLOGIC CONFERENCE

University of Oklahoma School of Medicine

Presented by the Departments of Pathology and Surgery

HOWARD C. HOPPS, M.D. AND PAUL M. VICKERS, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HOPPS: The case for discussion today is interesting from several viewpoints, one of which concerns the diagnosis. You have studied the protocol and realize that the hospital stay of this patient was so limited that there was not an opportunity to determine many of those facts which would have been valuable in arriving at the proper diagnosis. Dr. Vickers will analyze the clinical data.

PROTOCOL

Patient: F. L. H., white male, age 71; admitted October 29, 1945; died October 31, 1945.

Chief Complaint: Bleeding from rectum, pedal edema, dyspnea and orthopnea, substernal oppression.

Present Illness: For the past year this patient had noticed nocturnal dyspnea, orthopnea, and pedal edema. He had passed blood from the rectum occasionally. For five years he had been chronically constipated and this had been more pronounced in the last six months. Approximately 38 hours before admission he began to pass blood per rectum; at first black, this later became red. The hemorrhage was profuse and persisted until his entrance to this hospital. The patient had lost weight for the last two years, amount not known.

Past and Family History: Not obtained.

Physical Examination: On examination the patient was very pale, dyspneic, and acutely ill. The skin was cold, and he was perspiring. The right pupil was larger than the left. He was partially edentulous. The heart-beat was irregular and a loud blowing systolic murmur was heard at the aortic area. The blood pressure was 100/70, the pulse 100. There was a firm, irregular mass in the left lower quadrant with some local tenderness. There was moderate pedal edema.

Laboratory Data: On admission, October 29, 1945, the urine was yellow, cloudy, and acid. The specific gravity was 1.016, there was a trace of albumin, no glucose, and 30-40 white blood cells per high power field. On October 30, 1945, the hemoglobin was 3.75 Gm., the red blood cell count 1,750,000, and the white blood cell count 20,100 with 92 per cent neutrophils and 8 per cent lymphocytes.

Clinical Course: The patient was given morphine sulfate, grains ⅙ in the emergency room and an infusion of 5 per cent glucose was started immediately. After he had received 1000 cc., 500 cc. of whole blood was given. Oxygen was given by nasal catheter. The patient appeared much improved subjectively and objectively; however, his blood pressure persisted at 90/60. His pulse ranged around 80/min. The following day the patient felt much better and ate well until the evening when he went into a "worse condition again" and responded poorly. Another 500 cc. blood transfusion was given. His temperature, subnormal on admission, rose to 103° (R). On the third hospital day he developed a loud friction rub and rales over the right chest. He refused to leave the nasal oxygen tube in place. Penicillin, 40,000 units, was given I.M. Respiration became progressively slower, and the patient lost consciousness. He expired at 9:50 p.m., 52 hours after admission.

CLINICAL DIAGNOSIS

DR. VICKERS: This elderly white man was acutely ill. He complained of massive hemorrhage from the rectum. You will note also that he suffered from marked anemia; hemoglobin was 3.75 Gm. Initially, the blood passed per rectum was of black color, later it became bright red. This matter of color is of great significance as you know. The

most common cause of bright red blood at this site is hemorrhoids. This patient, however, had a mass in the left lower quadrant which was tender and this directs our attention to some intra-abdominal lesion there. Rarely do individuals who have lesions of the ascending colon pass much blood. Gross hemorrhage, per rectum, usually originates from a lesion distal to the splenic flexure and, most often, in this age group it results from *carcinoma of the sigmoid or rectum.* Due to the short period of hospitalization and the patient's general condition, physical examination and laboratory studies were, of necessity, incomplete. One examination that might have been done and which would have been very helpful is a sigmoidoscopic visualization of the colon. Probably this would have been done had he been in the hospital longer. Actually there are very few contraindications to this procedure and even though this patient was acutely ill and suffering from recent massive hemorrhage, one would expect little untoward reaction from sigmoidoscopy, if properly done. This patient complained of constipation rather than diarrhea and that is helpful in localizing the lesion. As you know, carcinoma of the large intestine may cause alternating diarrhea and constipation, or either alone. The history of chronic and progressive constipation would tend to localize this lesion in the left colon. Lesions in the rectum or near the anal opening usually provoke tenesmus. In such a condition the patient will have frequent urges to defecate but will pass only a little mucus. Usually this is interpreted by the patient as constipation although an occasional individual will regard this as diarrhea simply on the basis of frequency. We have no story of this sort here so we must assume that the primary lesion is above the rectum or anorectal juncture. If the lesion were in the right colon the classical signs and symptoms would include secondary anemia as a prominent manifestation. There is usually also "dyspepsia." Because the cecum is relatively large and because neoplastic lesions usually occur on the lateral wall, obstruction seldom results. There may be increased frequency of movements and these patients often complain of diarrhea.

In elaborating a more complete differential diagnosis, *diverticulitis* should also be considered. This is most common in the descending colon. There may be peridiverticulitis and, occasionally, bleeding. Severe massive hemorrhage, as a result of diverticulitis, is rare. *Polyposis* may cause massive bleeding from the bowel. This usually occurs in a younger age group however. Polyposis may be complicated by carcinomatous change, but again this usually occurs at an earlier age. *Amoebiasis* may produce hemorrhage from the rectum. If one of these ulcers perforates it may cause fever, an abdominal mass, etc. *Tuberculosis* of the colon occasionally causes bleeding. The tuberculous lesions usually occur in the cecum or ascending colon however. *Bacillary dysentery* may rarely cause discharge of blood from the rectum. Diarrhea is usually the outstanding symptom. Getting back to the case at hand, let us direct our attention again to the mass which presented itself in the left lower quadrant. When we consider the general condition of this patient, the various physical findings, the story of rectal hemorrhage, the anemia, etc., it appears that this abdominal mass is most likely an effect of impaction, pericolitis or sigmoiditis. We know that carcinoma of the descending colon, sigmoid or rectum rarely presents as an easily palpable abdominal mass. Therefore, if a mass is present under these conditions, that mass is usually inflammatory in nature even though associated with and caused, indirectly, by a neoplasm. In other words, it signifies perforation of the bowel with secondary inflammatory reaction. The site where perforation occurs most often from carcinoma is the sigmoid colon. Considering the chronicity of this patient's course, the history of progressive constipation, the sudden massive hemorrhage, and the mass in the left lower quadrant, I believe that this man had a *slowly perforating carcinoma of the sigmoid colon.* Not only would this account for the abdominal mass, but would logically explain the marked bleeding. The patient's fever rose after he was admitted and I assume that that was due to a terminal pneumonia. I cannot say what the immediate cause of death was.

CLINICAL DISCUSSION

DR. HOPPS: You said that this was possibly a perforating carcinoma of the sigmoid — does that imply peritonitis?

DR. VICKERS: The terminal fever could be accounted for on this basis but is not necessarily due to that. The ordinary carcinoma of the sigmoid or colon is not readily palpable and when a mass does present, it makes us think of a pericolitis, i.e., localized peritonitis. Ordinarily perforation occurs very slowly and causes local inflammatory reaction rath-

er than diffuse peritonitis. There are sometimes adhesions of the surrounding organs. Local infection, in relation to a carcinoma of the sigmoid, rarely results in this much fever. The temperature is usually 101° or sometimes 102° F.

QUESTION: What percentage of patients with carcinoma of the sigmoid colon might be expected to have a terminal diffuse peritonitis?

DR. VICKERS: Very few.

QUESTION: What about metastases?

DR. VICKERS: The average carcinoma of the rectum is usually not seen by the surgeon until it has been there from eight to 12 months. Out of this average group the highest incidence of five-year cures is reported as about 50 per cent. Approximately 20-30 per cent of all lesions of the colon will present matastases by the time the diagnosis is made. I do not know whether this man had metastases or not. In the terminal cases that I have seen, I have not been impressed by marked effects from the metastatic lesions. The cause of death is usually more closely related to the primary lesion itself.

QUESTION: Is rather massive bleeding from the intestinal tract a contraindication to sigmoidoscopy?

DR. VICKERS: There are no contraindications to sigmoidoscopy if it is carefully done. Patients are prone to have hemorrhage after radium therapy. Often, in this circumstance, a sigmoidoscopic examination must be done in order to find the point of bleeding and cause its cessation. Many times barium enemas are contraindicated and, especially here, even in acutely ill patients, sigmoidoscopy is the examination of choice. In cases of diverticulitis, for example, if barium is given by rectum, often the barium is retained — then special treatment is necessary to prevent inspissation and impaction.

QUESTION: If the patient had been in better condition would he have been operated on regardless of his age?

DR. VICKERS: There is no inoperable case if the patient can withstand an anesthetic — regardless of age.

DR. EMERY: I want to second Dr. Vickers' statement in regard to barium enemas. It is better not to ask for this examination until it appears to be essential for making the diagnosis. We have refused several requests lately until after the cases had been sigmoidoscoped. Only shadows are seen by x-ray. All of our diagnoses are based upon variations in shades — black, gray, etc. If the lesion is above the range of the sigmoidoscope one is certainly justified in asking for barium enema. No x-ray studies were done in this case. I do not believe that any information would have been gained by barium enema studies that could not have been better and more safely learned from sigmoidoscopic examination.

QUESTION: How much pressure would you use in giving a barium enema?

DR. EMERY: Very little. We regulate the pressure and keep it very low. We do not try to force it through an obstruction.

ANATOMIC DIAGNOSIS

DR. HOPPS: I have become more and more impressed by the value of the written word in the study of medicine. By this statement, I seek to emphasize the importance of the medical history and the careful recording of the physical findings. Dr. Vickers, although he never saw this patient and although he received no more information than was given to you in mimeographed form, was quite correct in his diagnosis. As a matter of fact his diagnosis was much more complete than that of the men who actually saw and cared for this patient. This man did have a carcinoma of the sigmoid. The mass in the left lower quadrant, however, was the result of inflammatory tissue which was secondary to a penetrating and perforating carcinoma there. There was considerable fibrous tissue reaction of the surrounding tissue so that the mass in the abdominal cavity was not limited to the colon but was composed in a large measure of fibroplastic tissue and adherent indurated omentum. Although just about everything was drawn from the abstract that could be, the picture is not quite as simple as was presented. This man actually had five conditions, each one of which was significant in that it produced an important disease. Three of these conditions were not evident clinically. In addition to focal peritonitis this patient had *diffuse peritonitis* at the time of his death. As a matter of fact this was probably the precipitating cause of death. The usual septic response from this type of lesion was masked by (a) extensive bronchopneumonia, and (b) extreme debility. In the abdominal cavity we found 150 cc. of purulent fluid. Loops of intestine were matted together by easily torn adhesions. In the rectosigmoid area there was, as previously mentioned, much fibrous tissue and adherent omentum. There was a tiny perforation of the sigmoid colon, less than one mm. in diameter, and this was the

site from which the peritonitis arose. There was marked bronchopneumonia also and this was diagnosed by Dr. Vickers from the data presented to him. Thus, we have established the fact that this patient had a carcinoma of the sigmoid colon which had perforated, giving rise to local peritonitis and an inflammatory mass. Furthermore, the nature of this lesion explains the massive hemorrhages, the state of shock which this man exhibited, and the secondary anemia (see Figure 1). In addition, a generalized peritonitis and marked bronchopneumonia both acted as precipitating causes of death. The patient also had a septicemia or pyemia during his terminal illness. This resulted in septic infarcts of the lungs and, in turn, infarcts of the spleen and kidneys. Those infarcts in the lungs were in the process of suppuration so that the patient actually had several lung abscesses. The heart was involved by yet a different process which was independent of the others. The loud systolic murmur heard at the aortic valve was not hemic in origin. The disease responsible for this murmur was calcific aortic valvulitis. The cusps were thickened, nodular, and there were dense areas of calcium up to three mm. in diameter. These brought about a moderate degree of stenosis of the valve. In response to this aortic stenosis, the heart was almost twice the expected size, 550 Gm. The right ventricle of the heart was thickened two times, eight mm.; the left, one and one-half times, 18 mm. He was not in obvious clinical congestive failure, but again the debility and state of shock made precise evaluation impossible. We do have morphologic evidence of chronic passive congestion of the spleen, liver, and lungs, so that we know that this cardiac lesion was of significance.

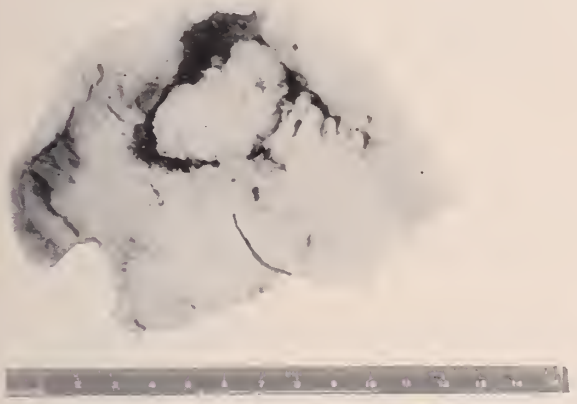


Figure 1
This is the primary neoplasm found in the sigmoid colon. Note the extent of obstruction by the fungating polypoid mass, also the extent of penetration and replacement of bowel wall. The fibrous tissue reaction to focal peritonitis is evident.

DISCUSSION

QUESTION: What was the source of hemorrhage?

DR. HOPPS: This neoplasm consisted of a fungating infected mass and there was penetration of the bowel wall. In the course of this penetration, the continuity of blood vessels was interrupted. We hardly expected to find the exact source of the hemorrhage and we did not do so. Remember that extensive bleeding had not occurred for the last two days of life.

DR. VICKERS: What about the irregular pupils?

DR. HOPPS: In older people, particularly after morphine, this is frequently observed. This man was given morphine when he first came into the hospital. Very frequently at necropsy we find variation in the size of the pupils that was not manifested during life.

DR. VICKERS: Why was he given morphine?

DR. HOPPS: On the basis of shock, I imagine. Do you not give your patients morphine when they are in shock?

DR. VICKERS: If they are not in pain, we do not.

QUESTION: Which was the oldest, the pneumonia or the peritonitis?

DR. HOPPS: About the same age; if you are trying to determine the basis for fever, I believe that was due to the peritonitis.

QUESTION: Were metastases present?

DR. HOPPS: Although the neoplasm had been present for some time, the metastases were limited to the regional (mesenteric) lymph nodes. The liver is usually the site of distant metastasis. As Dr. Vickers pointed out, distant metastases usually occur relatively late, hence the high incidence of curability. As to the frequency of this lesion, of all neoplasms in the large intestine, approximately ⅓ occur in the rectum, ⅓ in the rectosigmoid, and the remainder are distributed throughout the rest of the colon.

DR. WOLFF: What did you find in the arch of the aorta?

DR. HOPPS: There was atherosclerosis. If you are thinking of mural thrombosis of the aorta as a possible explanation for the splenic and renal infarcts, no evidence of thrombosis was found. As a matter of fact, we consider atherosclerosis of the *aorta* a rather rare cause of embolic phenomena.

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President's Page

Another year has come and gone, bringing with it pleasure and happiness as well as sorrow. In closing up the year's work and activities I am not unmindful of the whole-hearted cooperation of the membership, all committees, and the personnel of the Association Office.

It is impossible to single out the many individual members who have rendered valiant service to the Association this year, but to each of them I extend my sincerest thanks.

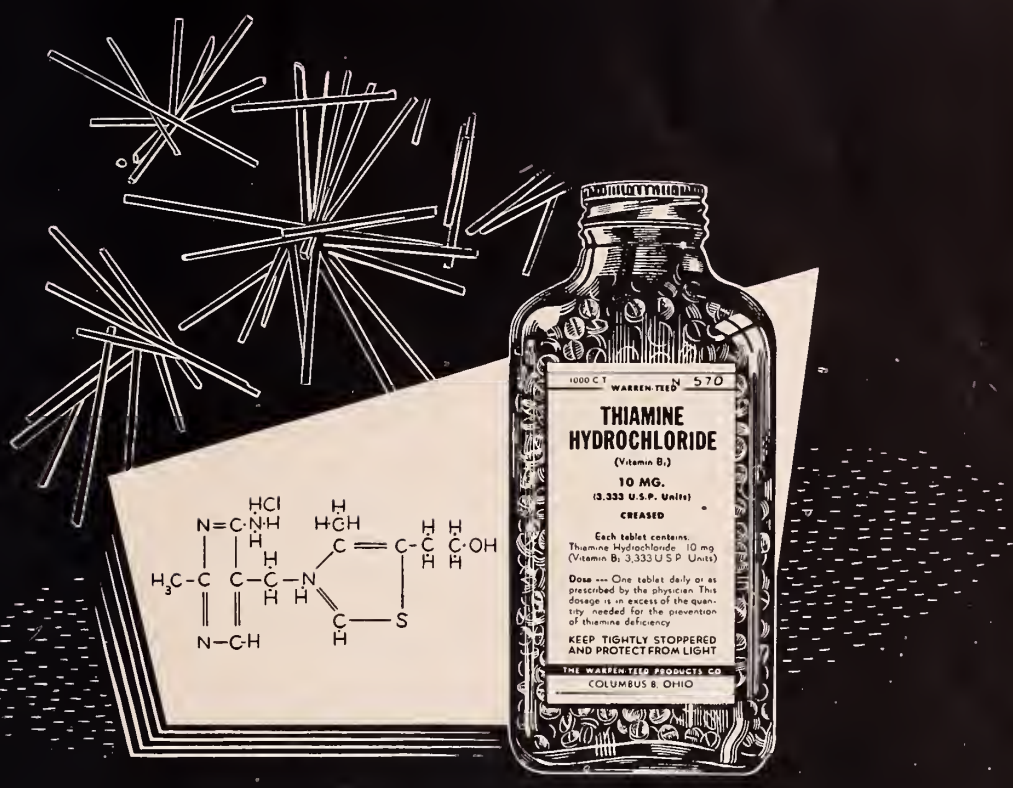
The Committees have all been active and have done their work well and deserve the highest praise and thanks of the entire membership. They have been diligent. Please accept my thanks for a duty well and cheerfully done.

It has been a pleasure to work with the Council, and the earnest, thoughtful, and conscientious work done by them is reflected in the condition of the Association and its present position among the Associations in the United States.

The record has been made; time alone will determine its value.

L. C. Guyer Kendall

President.



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1. Eggleston, C., in Cecil, R. L.: A Textbook of Medicine, ed. 6, Philadelphia, W. B. Saunders Company, 1943, p. 1154.

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Special Article

Fifty Historic Years

This is not a biography but a brief account of a living force running continuously and consecutively through the history of medicine in Oklahoma since the year 1901. At the Oklahoma Club on the evening of March 27, 1947, Dr. William Ward Rucks' associates at the Oklahoma City Clinic gave a dinner to felicitate him upon the successful completion of fifty years in the practice of medicine since his graduation from the University of Tennessee Medical Department March 27, 1897. For a short time after his graduation Dr. Rucks was associated with one of his professors in a private sanatarium for nervous and mental diseases, after which he became assistant physician in the Central Tennessee Hospital for the Insane. In the spring of 1901 he left this assignment to enter the general practice of medicine in Guthrie, Oklahoma.

In 1905, when Sir Almoth Wright developed bacterial vaccines and advocated their administration under the exacting guidance of the opsonic index, Dr. Rucks took a course in the production, technique, standardization, and administration of bacterial vaccines under Dr. William Litterer, who was a pupil of Sir Almoth Wright. This was before vaccines were on the market. After the day's clinical load had been lifted, a good part of the night was devoted to opsonins. This was Dr. Rucks' way of making sure that the morning sun might shine on modern medicine in Oklahoma.

In 1908 he was commissioned by Governor Haskell to help organize the hospital for the insane at Fort Supply. When this was accomplished, he returned to Guthrie where he continued in general practice until he entered the Army in 1917. His full term of service was in the Base Hospital at Fort Sam Houston. After having served as Chief of the Medical Service, he retired with the rank of major. He then came to Oklahoma City, where in association with Dr. A. L. Blesh he acquired the then small Wesley Hospital owned by Dr. Camp. With this hospital as a nucleus, he and Dr. Blesh established the Oklahoma City Clinic. The development of Wesley under this management has been phenomenal. When the wing now under construction is completed, the bed capacity will be 200. The hospital and the well-established clinic have evolved from the initial efforts of Drs. Rucks and Blesh. The spirit of the clinic and the hospital service has consistently reflected the personality of Dr. Rucks.



William Ward Rucks, M.D.

It may be said that the climax of this crescendo service career was reached in the record of his phenomenal service as Chairman of Procurement and Assignment for Oklahoma from August, 1942, to the close of the war. The constructive movements initiated and supported by Dr. Rucks' industry, knowledge, and personality have set in motion forces which will perpetuate his name in the history of Oklahoma.

ASSOCIATION ACTIVITIES

NEW MEMBERS

The following physicians have become associated with their county societies and the State Association in the first four mouths of 1947:

Felix M. Adams, Jr., Nowata
George M. Adams, Tulsa
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George R. Booth, Jr., Wilburton
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Turner Bynum, Oklahoma City
J. N. Byrd, Jr., Pauls Valley
H. Gray Carter, Tulsa
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Betty Conrad, Stillwater
P. J. Cunniugham, Oklahoma City
John C. Dovell, Prague
*Safety R. First, Checotah
A. L. Frew, Jr., Oklahoma City
William T. Gill, Ada
Rufus C. Goodwin, Oklahoma City
Minor E. Gordon, Claremore
Jerry B. Gwin, Ada
Ralph B. Jones, Nicoma Park
Oliver J. Hagg, Waurika
W. B. Harned, Walters
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Eugene M. Henry, Muskogee
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J. V. Hyer, Garber
Harry McGee, Ada
J. B. Golrick, Erick
Dalton B. McInnis, Okeene
M. Wilson Mahone, Hobart
John D. Moore, Hugo
James L. Nicholson, Norman
Emil E. Palik, Tulsa
Reynold Patzer, Oklahoma City
Ralph S. Phelan, Hobart
Perry G. Pratt, Ponca City
H. M. Prentiss, Roosevelt
Andrew Ritan, Tahlequah
Evelyn Rude, Norman
Harmon U. Sanders, Muskogee
Paul O. Shackelford, Tulsa
Jackson A. Smith, Cheyenne
Joseph J. Smith, Shattuck
Wendell L. Smith, Tul a
Robert S. Srigley, Ardmore
Harry A. Stalker, Pond Creek
George K. Stephens, Ada
Paul T. Strong, Tulsa
William F. Thomas, Jr., Tulsa
William B. Thompson, Walters
Henry C. Trzaska, Hennessey
A. W. Truman, Ardmore
R. M. Wadsworth, Tulsa
Ethel M. Walker, Ardmore
Rhonald A. Whiteneck, Waynoka
Donald J. Wilson, Pauls Valley
Henry D. Wolfe, Hugo
Reed Wolfe, Hugo
*Armed Forces.

OKLAHOMA PHYSICIANS RALLY TO AID STRICKEN WOODWARD

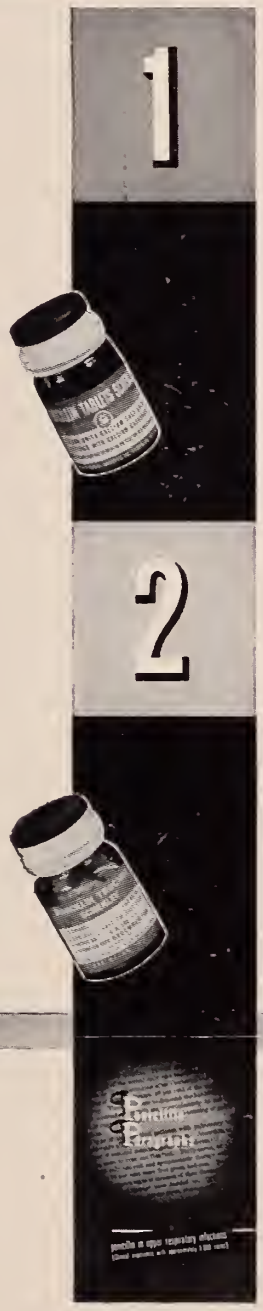
The story of the Woodward disaster when fully told reveals a remarkable job of aid to survivors of the disaster by Oklahoma citizens, including the medical profession of the State. Eyewitnesses to the devastation describe it as far worse than the newspaper accounts could ever represent. In Oklahoma City, first news of the catastrophe reached Dick Graham, Executive Secretary of the State Medical Association, at 12:15 A. M. the night of the tornado. He immediately began to contact the doctors and nurses who made up the first rescue party by air to the stricken area. All these persons assembled at the headquarters of the Highway Patrol in Oklahoma City, and the Highway Patrol took them out to Tinker Field where an Army C-54 plane was waiting to carry them to Woodward.

Eleven private physicians from Oklahoma City, plus four Army physiciaus, and nine nurses and technicians flew to the disaster scene through the cooperation of the Tinker Field Army Air Forces facilities. The C-54 carried, in addition to this personnel, medical supplies secured from the State Health Department, the Red Cross, and the Station Hospital at Tinker Field. At 1:30 A. M. the Highway Patrol left the rescue party at Tinker Field, and the plane departed at 2:45 A. M. It landed at 3:45 A. M., after an hour's flight over what would normally be a three and one-half hours' drive, at an auxiliary air field at Gage. The plane was met by citizens from both Shattuck and Woodward, who reported that the Newman Hospital at Shattuck and the Memorial Hospital at Woodward had many casualties. The doctors, nurses, and technicians were divided between these two towns as were the medical supplies, and they were rushed into the hospitals to give medical attention to the injured. These doctors remained on duty all night and until late the following day, by which time additional medical assistance had arrived.

In the interim, senior medical school students, interns, and residents had driven into the area from Oklahoma City and were rendering valuable assistance. Doctors, nurses, and technicians began arriving in the devastated area early the next morning from as far away as Wichita, Kansas, and Amarillo, Texas. Doctors came from many surrounding areas, including Ponca City, Enid, Elk City, Sayre, Clinton, Alva, Tulsa, and many others, and so many persons came that it is impossible to say who all the individuals were or the towns they represented.

Immediately arrangements were made with Tinker Field to evacuate the more seriously inured by air to Oklahoma City, where the entire staffs of the Oklahoma City hospitals had been alerted to take care of them. Most of the injured evacuated by air fell into the group of either orthopedic or neurosurgical cases. Arraugements were made with Santa Fe to evacuate by train patients to the hospital at Alva. In the meantime, in addition to the hospital at Shattuck which took care of a great many of the injured in Higgins, White Deer, and Glazier, Texas, the more seriously injured were transported to the Community Hospital at Mooreland, ad a temporary hospital was set up in the Baker Hotel in Woodward. Emergency care and operative procedures were almost impossible to carry on in Woodward due to the fact that there was no fuel nor water until the

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following morning and even emergency power then made available was not of sufficient voltage to operate x-ray.

The Public Health Department at once moved into the area to supervise and protect the people from epidemics occasioned by breaking of water mains and sewage. As late as the third day it was still necessary to take medical care into the area, as some of the injured were too serious even to be evacuated. Seventy-four persons including children were evacuated to University Hospital in Oklahoma with only four fatalities and none dead upon arrival. It was extremely fortunate that the area had three excellent hospitals, Shattuck, Woodward, and Mooreland, and that none of them were damaged. Fortunately, too, none of the local physicians was injured, and all gave heroically of their skill and strength in aiding the survivors.

It was necessary to clear out as rapidly as possible the hospitals in the stricken area and diffuse the long-stay cases so those less injured could be cared for as quickly as possible, and the normal services of the hospitals could be resumed. For example, there were babies waiting to be born. Hundreds of people in Woodward had injuries which were not emergencies but which ultimately required care. As late as 24 hours after the catastrophe people were reporting for aid with minor fractures, exhaustion, hysteria — people who had borne up during the early part of the disaster but could no longer go unattended. The injured were all terribly dirty — pebbles and splinters were driven into their skin and bodies and they suffered multiple lacerations and bruises which had to be cleansed and treated.

This report cannot give due credit to every one who lent assistance, but mention should be made of the men and women who operated the ambulances. In many respects problems of medical supplies were more acute than the need for trained personnel. Blood plasma, whole blood, penicillin, sulfa, narcotics, antitoxins, and anesthetics (ether and sodium pentathol) were scarce and although available elsewhere in quantities, the problem was getting them quickly where needed. There were long lines of people waiting to give blood if needed, but there was not a sufficient supply of equipment necessary to give transfusions.

The Woodward situation showed the value of rapid, properly supervised air evacuation. The personnel at Tinker Field should be most highly complimented on their part in utilizing Army equipment and ambulances and bringing in supplies that had been provided by the Red Cross and others. They also transported doctors and nurses. The Highway Patrol also should receive commendation for their part in the tasks of supply and evacuation. In the evacuation the Army principle of tagging the wounded was used, and all people evacuated from immediate hospitals left with a tag stating what attention they had been given and what diagnosis had been made.

One difficulty encountered in a situation of this sort was the lack of means of communications with the outside areas, where help was waiting if the need were known. Relief organizers in Oklahoma City were unable to contact the leaders of the rescue work in Woodward to learn the true conditions there and what was needed in the way of personnel and supplies. The catastrophe showed the definite need for establishing state-wide planning for the handling of disasters, inasmuch as there was very little coordination of all available facilities.

Although it is impossible to give the names of all who assisted in the care of the injured, the following list of those flying to Woodward from Oklahoma City is available: Physicians—Austin Bell, A. M. Young, James Asher, L. Stanley Sell, Gerald Bednar, Charles M. Bielstein, Edward W. Ferris, Fred W. Taylor, and Warren Poole. Nurses—Nadine Peck, Wanda Cassilbery, Corinne Baker, and two Red Cross nurses.

The following physicians from University Hospital made the trip to Woodward to help in the care of the wounded: A. M. Brixey, A. C. Lisle, C. S. Smith, Charles W. Freeman, Hal Burnett, Harrell C. Dodson, and P. E. Johnson.

NATIONAL HEALTH ACT OF 1947

The National Health Act of 1947, which has been introduced by Senators Taft, Smith, Ball, and Donnell, is apparently one phase of the Republican Party's program of health legislation. This bill is a rewrite of a bill of a similar nature introduced in the pregious Congress and is considered as social legislation to take the place of the Wagner-Murray-Dingell Bill with the objectionable compulsory features of the latter legislation removed.

The general public and those professions interested in the health of the people are genuinely interested in all legislation particularly on a Federal level that would interject the Federal government into this large field of our public life hitherto not invaded. Careful consideration must be given by medicine as to the extent the National Health Act of 1947 will change the present practice of medicine and whether or not its provisions are designed to raise the standard of health of the American people.

It has been reported that the American Medical Association's 10-Point Health Program has been considered in the writing of this bill, but so long as bills introduced in Congress oftentimes are amended from their original text, it is believed that endorsement of this particular legislation must be carefully studied before given.

In order that the profession may have a brief analysis of the purposes of the act, a short resume is given. A more detailed analysis of the bill will be sent to each member of the Association by direct mail.

Condensed Summary of Senate Bill 545 "National Health Bill"

Senate Bill 545 establishes a National Health Agency. It provides for a National Health Administrator who must be a doctor of medicine and will receive $15,000 annually for his services. The Public Health Service, St. Elizabeth's Hospital, the Food and Drug Administration, and the Division of Health Studies and the Children's Bureau now in the Social Security Administration are to be established within the National Health Agency. Other departments relating to health are to be studied and considered for transfer to the Agency.

The National Health Agency is proposed to coordinate all health functions of the Federal Government into that agency. The Agency is to expand the activities of the Public Health Service and to promote and encourage medical and dental research through the National Institute of Health and by direct grants-in-aid to the States. *Senate Bill 545 appropriates two hundred million dollars annually for grants-in-aid to states or local agencies as a supplement to local funds for the provision of medical, hospital, and dental services to all people unable to pay.* Physical examinations for all children in elementary and secondary schools in each state are to be provided. Specific funds are to be appropriated for the development of more effective methods for the prevention and control of cancer. Specific appropriations for examination and care for indigent dental patients are to be made as well as the establishment of a National Institute of Dental Research as a division of the National Institute of Health.



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One important fact stands out in the rapidly expanding clinical record of Tridione: Thousands of children formerly handicapped in school and play by petit mal, myoclonic or akinetic seizures are finding substantial relief through treatment with Tridione. In one test, Tridione was given to 150 patients who had not received material benefit from other drugs.[11] With Tridione, 33% became seizure free; 30% had a reduction of more than three-fourths of their seizures; 21% were moderately improved; 13% were unchanged, and only 3% became worse. In some cases, the seizures, once stopped, did not return when medication was discontinued. Tridione also has been shown to be beneficial in the control of certain psychomotor epileptic seizures when used in conjunction with other antiepileptic drugs.[12] Wish more information? Just drop a line to ABBOTT LABORATORIES, North Chicago, Illinois.

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HOSPITAL SERVICE IN OKLAHOMA

The Council on Medical Education and Hospitals of the A. M. A. has released its annual report on hospital service in the United States, appearing in the April 12 issue of the Journal of the A. M. A. The report, which is based on census returns from 98 per cent of all hospitals registered by the A. M. A., gives the following interesting figures on the quantity and types of service rendered by Oklahoma hospitals in 1946. Only A. M. A. registered hospitals are listed — that is, those hospitals given basic recognition by the A. M. A. and concerning which the A. M. A. has no evidence of irregular or unsafe practices.

Hospital Facilities by Types of Control

Registered hospitals in Oklahoma total 126. Of these, 44 are government controlled, 21 are controlled by Church and other nonprofit associations, and 61 are proprietary controlled or operated for profit. The following figures give a comparison of hospital facilities available under each type hospital.

	Total Hospitals	Beds	Bassinets	Patients Admitted	Average Census
A. Government hospitals	44	13,469	288	63,215	12,040
B. Nonprofit	21	1,964	395	59,826	1,432
C. Proprietary	61	1,853	435	64,163	1,216

These three main types of control may be broken down further, as follows:

Government Hospitals

	Total Hospitals	Beds	Bassinets	Patients Admitted	Average Census
Federal	17	1,894	111	25,260	1,040
State	16	11,059	47	21,421	10,694
County	2	119	20	3,026	67
City	9	397	110	13,508	239

Nonprofit Organizations

	Total Hospitals	Beds	Bassinets	Patients Admitted	Average Census
Church Related	10	1,089	258	36,037	885
Nonprofit Assns.	11	875	137	23,789	547

Proprietary

	Total Hospitals	Beds	Bassinets	Patients Admitted	Average Census
Individual & Partnership	51	1,408	358	48,556	874
Corporations (Profit unrestricted)	10	445	77	15,607	342

Hospital Facilities by Type of Service

Of the 126 registered hospitals in Oklahoma, 102 are general hospitals, eight are devoted to nervous and mental cases, five to tuberculosis, two are maternity hospitals, two are exclusively orthopedic hospitals, two isolation hospitals, and five are hospital departments of institutions. Oklahoma has no registered hospitals caring exclusively for (1) industrial cases, (2) eye, ear, nose, and throat, (3) children, or (4) convalescent or rest cases. The following chart outlines the facilities available in each category of service rendered:

Oklahoma Hospitals
Facilities by Type of Service Rendered

	Hospitals	Beds	Bassinets	Patients Admitted	Average Census
General	102	6,443	1,065	170,009	4,231
Nervous & Mental	8	9,180	11	4,133	9,594
Tuberculosis	5	797		943	461
Maternity	2	47	40	441	20
Orthopedic	2	78		1,358	61
Isolation	2	530	2	5,011	271
Hospital Depts. of Institutions	5	211		5,309	50
TOTALS	126	17,286	1,118	187,204	14,688

Comparison With 1945 Figures

A comparison of the current A. M. A. report with the figures published a year ago based on the hospital census for the year 1945 reveals a decrease in hospital facilities in Oklahoma, which is in line with a marked decrease in total hospital service in the United States, according to the A. M. A. charts. This decrease in number of hospital beds, admissions, average census, etc., throughout the nation is no doubt due to the reduction in military hospitals in the last year and the readjustment from war to peace.

The following chart shows this decrease as pertains to Oklahoma:

	Total Hospitals	Beds	Bassinets	Patients Admitted	Average Census
1945	135	26,249	1,141	222,079	18,561
1946	126	17,286	1,118	187,204	14,688

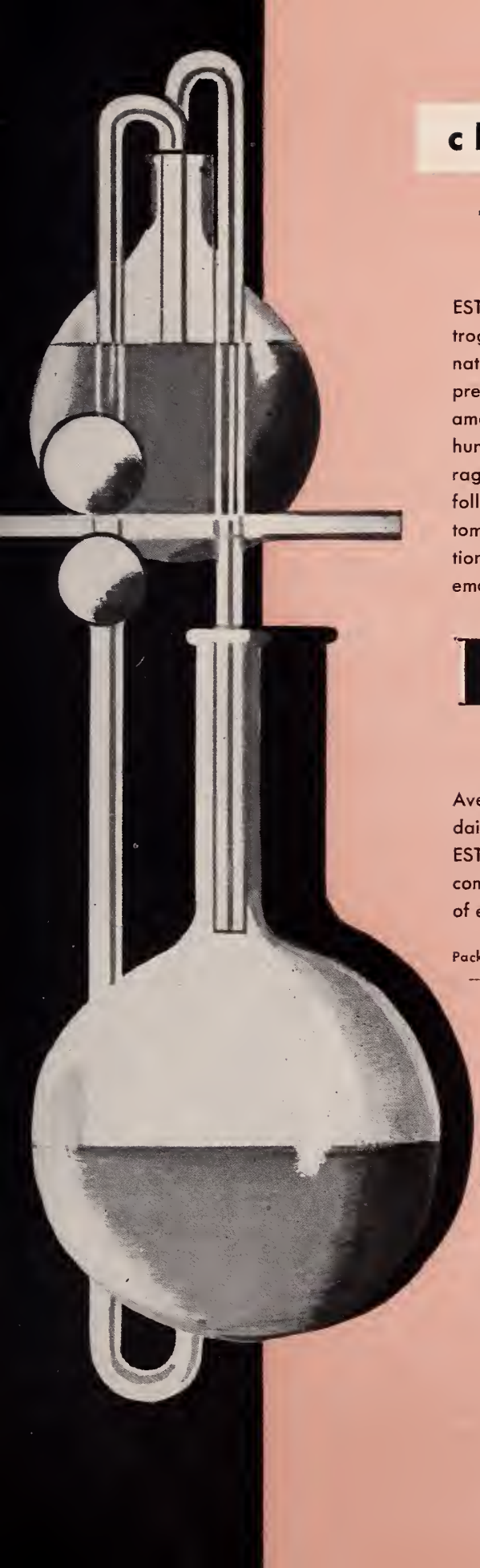
Hospital Births

In contrast to the decrease in hospital facilities in the past year, Oklahoma hospital births have increased from 26,759 in 1945 to 27,522 in 1946. These figures also are in line with the national trend, for, as the J. A. M. A. points out, for the first time in history hospital births in the United States reached and passed the two million mark. The figures for the Nation in 1945 were 1,969,667; in 1946, they reached 2,136,373.

Internships and Residencies

The Report shows that in 1946 Oklahoma had five civilian hospitals approved by the Council on Medical Education and Hospitals for internships; namely, St. Anthony Hospital, Oklahoma City; University Hospitals, Oklahoma City; Wesley Hospital, Oklahoma City; Hillcrest Memorial Hospital, Tulsa; and St. John's Hospital, Tulsa. These five hospitals offered 55 internships in 1946, with a total number of 38 interns.

There were five hospitals approved by the Council for residencies and fellowships: namely, Central Oklahoma State Hospital, Norman; Bone and Joint Hospital—McBride Clinic, Oklahoma City; St. Anthony Hospital, Oklahoma City; University Hospitals, Oklahoma City; and Hillcrest Memorial Hospital, Tulsa.



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1. Bickers, W.: Am. J. Obst. & Gynec. 51:100, 1946.

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Nursing Personnel and Schools of Nursing Education

The Report states that 12 accredited schools of nursing enrolled 893 student nurses in Oklahoma during 1946. Administrative nursing personnel numbered 120, with 26 full-time instructors, 196 supervisors and assistant supervisors, 149 head nurses and assistant head nurses, 526 general duty full-time nurses, 53 general duty part-time nurses, and 58 nurses not classified, making a total of 1,128 graduate nurses. In addition there were 203 private duty nurses, 1,204 practical nurses and attendants, 87 volunteer nurses aides, 244 orderlies, and 224 ward maids.

These figures also reveal a decrease from the survey of a year ago, when the A. M. A. reported 1,080 student nurses training in 13 accredited schools of nursing. The report for 1945 revealed 117 administrative nursing personnel, 28 full-time instructors, 215 supervisors and assistant supervisors, 177 head nurses and assistant head nurses, 681 full-time general duty nurses, 39 part-time general duty nurses, 42 nurses not classified, making a total of 1,299 graduate nurses. There were in addition 144 private duty nurses, 1,257 practical nurses and attendants, 274 volunteer nurses' aides, 553 orderlies, and 394 ward maids.

Technical Personnel

Full-time technical personnel employed by Oklahoma hospitals in 1946 numbered as follows: medical technologists, 133; x-ray technicians, 89; dietitians, 80; physical therapists, 20; pharmacists, 27; medical record librarians, 56; occupational therapists, 14; nurse anesthetists, 37; and clinical photographers, four. Part-time employees numbered: medical technologists, 42; x-ray technicians, 38; dietitians, five; physical therapists, nine; pharmacists, three; medical record librarians, 19; occupational therapists, one; nurse anesthetists, 10; and clinical photographers, three.

Oklahoma has three schools for x-ray technicians approved by the Council on Medical Education and Hospitals: namely, St. Anthony Hospital, Oklahoma City, J. E. Heatley, M.D., radiologist in charge; University Hospitals, Oklahoma City, J. E. Heatley, M.D., radiologist in charge; St. John's Hospital, Tulsa, S. Pollack, M.D., radiologist in charge. Applicants are required to have finished high school, and are issued a certificate upon the completion of from 12 to 24 months' training. There is no tuition. Maximum enrollment is from three to four.

The following three schools are approved for training of medical technologists: (1) St. Anthony Hospital, Oklahoma City, affiliated with the University of Oklahoma Agricultural and Mechanical College; H. Jeter, M.D., Pathologist in Charge; maximum enrollment six. (2) University Hospitals, Oklahoma City, affiliated with the University of Oklahoma School of Medicine; B. Halpert, M.D., Pathologist in Charge, maximum enrollment six. (3) St. John's Hospital, Tulsa, affiliated with the University of Tulsa; E. E. Palik, M.D., Pathologist in Charge, maximum enrollment four.

Minimum college prerequisite accepted by University Hospitals and St. Anthony is a degree; St. John's Hospital will accept applicants with two years of college work. Tuition is free in all three schools.

Hospitals Approved by American College of Surgeons

The following Oklahoma hospitals, numbering 33 in all, were approved by the American College of Surgeons as meeting unconditionally its minimum requirements for general standardization:

Valley View Hospital, Ada
Hardy Sanitarium, Ardmore

Claremore Indian Hospital
Western Oklahoma State Hospital, Clinton
Western Oklahoma Tuberculosis Sanitorium, Clinton
Cheyenne and Arapaho Hospital, Concho
Masonic Hospital, Cushing
Federal Reformatory Hospital, El Reno
Enid General Hospital, Enid
St. Mary's Hospital, Enid
Station Hospital, Fort Sill
Kiowa Indian Hospital, Lawton
St. Mary's Hospital, McAlester
Oklahoma Baptist Hospital, Muskogee
Veterans Administration Hospital, Muskogee
Central Oklahoma State Hospital, Norman
Ellison Infirmary, Norman
Oklahoma Bone and Joint Hospital—McBride Clinic, Oklahoma City
Oklahoma City General Hospital
St. Anthony Hospital, Oklahoma City
University Hospitals, Oklahoma City
Wesley Hospital, Oklahoma City
Pawnee-Ponca Indian Hospital, Pawnee
Ponca City Hospital
A. C. H. Hospital, Shawnee
Shawnee Indian Sanatorium
Shawnee Municipal Hospital
Stillwater Municipal Hospital
Oklahoma State Veterans Hospital, Sulphur
Wm. W. Hastings Hospital, Tahlequah
Talihina Indian Hospital
Hillcrest Memorial Hospital, Tulsa
St. John's Hospital, Tulsa

JANE TODD CRAWFORD STUDENT LOAN FUND IN GYNECOLOGY

The Woman's Auxiliary to the Southern Medical Association has established a postgraduate scholarship or loan fund for young southern physicians wishing to pursue the study of gynecology. The applicant must be of good character, capable of absorbing adequate knowledge, and not over 32 years of age. The loan must be returned in small installments after completion of the study.

Any young physician desiring to take advantage of this opportunity to strengthen weak spots in his training or familiarize himself more fully with the detailed study of this subject is invited to inquire of Mrs. J. Ullman Reaves, 1862 Government Street, Mobile 18, Alabama.

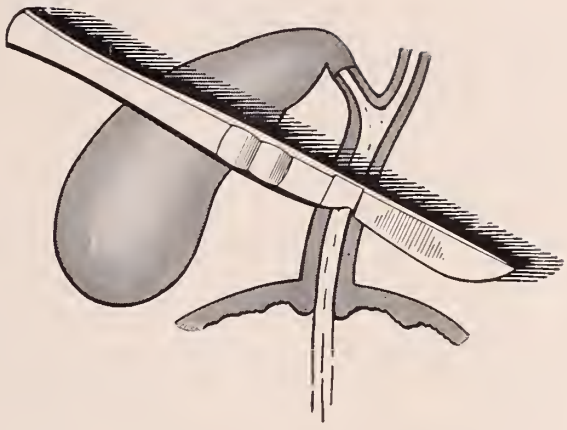
GASTROENTEROLOGICAL GROUP TO MEET

The National Gastroenterological Association will hold its 12th Annual Convention and Scientific Sessions at the Hotel Chelsea in Atlantic City, N. J., on June 4, 5, and 6, 1947, affording those interested in attending the Centennial Celebration of the A. M. A. a chance to be present at both meetings. Program and further details may be obtained from the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

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MEDICAL CONFERENCES — Each Wednesday, 9:00 A. M. to 10:00 A.M.

CLINICAL PATHOLOGIC CONFERENCES — Each Thursday 12:00 Noon to 1:00 P.M.

TUMOR CLINICS — First and Third Tuesdays (May 6 and 20) 8:00 A.M. to 9:00 A.M.

UROLOGIC-PATHOLOGIC CONFERENCE — Second Tuesday (May 13) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING — Second Friday (May 9) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE — Fourth Monday (May 26) 6:45 P.M. to 7:30 P.M.

Herbert Victor Lewis Sapper, Jr., (Med '44) was recently released from military service and is taking a postgraduate course in Pediatrics at Cincinnati, Ohio, at the Children's Hospital Research Foundation.

Dr. Pamela Prentice Parrish (Med '44), who interned at the University of Iowa Hospital, with her husband, Dr. R. G. Parrish, is now resident in medicine at Wesley Hospital, Chicago. Dr. R. G. Parrish (also Med '44) is now in the Army Medical Corps, serving as anesthetist with a Station Hospital at Nuremberg, Germany.

Dr. J. H. Abernethy (Med '39) was discharged from the Navy March 1, 1947, and has now entered private practice in Altus, Oklahoma.

The American Cancer Society and the National Research Council, Committee on Growth, have approved the research projects submitted by Dr. Howard C. Hopps and Dr. Mark R. Everett. They have recommended that the Oklahoma Division of the American Cancer Society grant funds for continued work on each of these independent projects. Dr. Hopps is centering his studies on anti-reticular cytotoxic serum (A.C.S.) and is particularly concerned with methods of preparation, titration, and therapeutic effects on cancer. Dr. Hopps is soon to visit several research laboratories in the East to consolidate his findings with those of other workers in this field.

The research work which the Department of Biochemistry has undertaken consists of an extensive investigation of the sugar-protein compounds in the body. The beginning phase of part of the work is to study such compounds in the blood of patients as compared with those in persons of normal health. Dr. M. R. Shetlar, from Ohio State University, is the research associate who is actively conducting the work under the direction of Dr. Mark R. Everett. Miss Janeal Villet (Utah State College) is assisting Dr. Shetlar.

The district meeting of the Society for Experimental Biology and Medicine for the tristate area of Oklahoma-Texas-Arkansas was held in Dallas, March 29. The Oklahoma delegation was the largest group present. Original papers were presented by Dr. Wiley McCollum, resident, University Hospital; Dr. Hunter, Physiology Department, University of Oklahoma; Dr. A. J. Stanley, Assistant Professor of Physiology, School of Medicine, University of Oklahoma; and Tom Gafford and Max Shideler, both students in the School of Medicine, University of Oklahoma. Dr. Arthur A. Hellbaum, Professor of Pharmacology, University of Oklahoma, was re-elected secretary of the society.

Dr. Carl Bunde, formerly with the School of Medicine, University of Oklahoma, and now Associate Professor of Physiology at Southwestern Medical School, conducted the Oklahoma group through Southwestern Medical School. It is housed temporarily in army barracks that are located adjacent to Parkland Hospital, Dallas, Texas. Dr. and Mrs. Bunde were hosts to a large portion of the Oklahoma delegation in their home Saturday evening.

OBITUARIES

Ovee John Colwick, M.D.
1880-1947

Ovee John Colwick, M.D., of Durant, died at his home April 2, 1947. He had been in poor health for the past year and recently retired from active practice and operation of the Durant Clinic. Born in Bosque County, Texas, August 8, 1880, he graduated from Southwestern Medical College, Dallas, in 1906, and moved to Durant in 1919 where he founded the Durant Hospital and Colwick Clinic with his brother, Dr. J. T. Colwick.

The Southwestern Medical Foundation in Dallas formally notified Mrs. Colwick that Dr. Bedford Shelmire, noted Dallas physician, has made a gift to the Foundation in memory of Dr. Colwick.

Dr. Colwick was a member of the Methodist Church and the Rotary Club. Survivors include his wife; two sons, Dr. J. C. Colwick of Palestine, Texas; and O. J. Colwick, Jr., of Sherman; a daughter, Mrs. Charles H. Davis, of Midland, Texas; four brothers, Dr. J. T. Colwick and N. M. Colwick of Durant, C. M. Colwick of Clifton, Texas, C. D. Colwick of Stephenville, Texas; and two sisters, Mrs. Fred Matson and Mrs. Arne Orbeck, of Clifton, Texas.

Jacob Meek Lanning, M.D.
1874-1947

Jacob Meek Lanning, M.D., formerly of Picher, died March 7, 1947, in his home in Miami, Oklahoma, following an illness of several months. He was born April 3, 1874, and received his medical education in Tennessee, being graduated in 1902. Dr. Lanning was licensed to practice medicine in Oklahoma in 1909, and came to the Ottawa County district in 1919. He specialized in surgery and practiced in Picher until he moved to Miami two years ago.

Dr. Lanning was a member of the Picher Lions Club and the Sacred Heart Catholic Church of Miami. Survivors are his wife, Mrs. Gladys Lanning, of Miami; two sons, Lenver C. Lanning and J. M. Lanning, Jr., and a daughter, Miss Lola Lanning, all of Chicago; and two grandchildren.



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Have You Heard?

The Legion of Merit was recently awarded to *Col. Earl R. Denny*, M. C., A. U. S., of Tulsa. According to the citation, Col. Denny rendered exceptionally outstanding and meritorious service as chief of the medical service at Gardiner General Hospital, Chicago, from October, 1943, to February, 1946. His energetic and untiring efforts in the care and treatment of his patients, combined with his studies in the use of penicillin, resulted in the recovery of many extremely critical cases. His work in this field was a most laudable contribution to the efforts of the Medical Corps. Dr. Denny has also been awarded the Army Commendation Ribbon.

Dr. Kenneth Roberts (OU Med '39) has begun general practice in Stigler in association with Dr. J. C. Rumley. Dr. Roberts was recently released from service in the Navy.

Dr. A. L. Dougan of Carmen recently celebrated his 50th anniversary in the medical profession. It was March 27, 1897, that he began practice in Hatfield, Missouri, but he has been practicing in Oklahoma since 1904. His son *Dr. A. E. Dougan*, is the third generation doctor in the family and is now practicing in Oklahoma City.

The Post Office Department will issue a new three-cent stamp commemorating the 100th Anniversary of the founding of the American Medical Association. The stamp will go on sale June 9.

Following his discharge from the Army as a major in the Medical Corps, *Dr. Clifford Bassett* has returned to Cushing and reopened his offices in the Hughes Building.

Editorial Offices of the Journal have received a copy of the first issue of the Quarterly Bulletin of the Students of the University of Oklahoma School of Medicine. This first copy was mailed to every physician in the State. The ambitious publication, "for and by students," will offer an opportunity to students who have done research and prepared scientific papers to have them published. It will further "serve to inform the medical profession of the State of Oklahoma of the work being done by their successors and . . . bring about a closer contact between present and future alumni who serve the people of the State of Oklahoma."

Dr. Haskell Anderson has resigned as Director of Health for Custer, Washita, and Beckham counties to enter private practice in Watonga.

Dr. Joseph R. Karlick, recently released from the Army Medical Corps with the rank of major, is now associated with Dr. Lyman C. Veazey and Dr. J. Hobson Veazey in the practice of medicine in Ardmore.

Dr. R. C. McCreery, pioneer physician in Erick since 1909, recently became the owner of the Erick Hospital and presented the institution as a gift to the City of Erick, explaining that he wanted to "give something back" to the people of the community whom he has served and whose friendship he has enjoyed so long.

Dr. G. H. Stagner, formerly located in Erick, has recently established offices in Edmond.

Dr. H. A. Rosier, a graduate of Kansas University School of Medicine, will be associated with Dr. D. B. Collins as head surgeon at the Waurika Hospital.

The Thirty-Fourth Anniversary of the Okmulgee County Medical Society was observed April 12 by a dinner at which *Dr. S. B. Leslie* made the anniversary address, also honoring *Dr. W. C. Mitchener*, who has practiced in Okmulgee for the last 50 years. Dr. Mitchener, Okmulgee's second mayor, came to the city in 1897 from Mississippi and has been head of the Okmulgee Hospital Board since 1935.

There are 98 physicians licensed in Oklahoma who received their medical degrees during or before the year 1896. This seems a remarkable record of length of service for so large a number of Oklahoma physicians.

Dr. William A. Hyde, Durant, was recently notified that he has been elected a Fellow of the International College of Surgeons, founded in Geneva, Switzerland. Dr. Hyde is a partner in the Colwick Clinic and Durant Hospital.

The Darwin Clinic, Woodward, recently announced the addition to their staff of *Dr. Wm. P. Folck* of Junction City, Kansas. Dr. Folck is a graduate of the University of Kansas.

Dr. Joe M. Parker has recently become associated with the LeRoy Long Clinic, Medical Arts Building, Oklahoma City.

Governor Roy J. Turner has appointed *Dr. Ollie McBride*, Ada physician, to the new five-man Pardon and Parole Board.

On March 23, 1947, *Dr. J. L. Lehew* celebrated the fiftieth anniversary of his graduation from the University Medical College of Kansas City, Missouri. He has been a practicing physician in Pawnee nearly 48 years. Seventeen members of his graduating class, originally numbering 82, are still living.

More than 1300 of Bryan County's 1600 4-H and FFA boys and girls were guests of *Dr. W. K. Haynie* recently at a giant barbecue serving 900 pounds of prime beef from two prize-winning club calves. Rector Swearengin, Durant businessman, was co-host with Dr. Haynie in this enterprise designed to encourage and inspire the club boys and girls to even greater achievements in the future.

Dr. Oscar White, Oklahoma City, has been re-appointed to the Board of Regents of the University of Oklahoma by approval of Governor Roy J. Turner and confirmation of the State Senate.

Having delivered some 10 000 babies during 36 years of service to his patients as specialist in obstetrics, *Dr. E. P. Allen* of Oklahoma City recently announced his retirement from active practice. Dr. Allen, who received his medical education in Texas and was graduated in 1911, moved to Oklahoma in 1913 and has practiced here continuously since.

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Claims, words, clever advertising slogans do sell plenty of products. But obviously they do not change the product itself.

That PHILIP MORRIS are less irritating to the nose and throat is not merely a claim. It is the result of a manufacturing difference *proved** advantageous over and over again.

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

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MEDICAL ABSTRACTS

SYMPATHETIC BLOCK OF STELLATE GANGLION: ITS APPLICATION IN ORTHOPEDIC CONDITIONS. Guy A. Caldwell, M.D., T. F. Roderick, Jr., M.D. and R. M. Rose, M.D., New Orleans. Jr. Bone & Joint Surgery, Vol. 28, No. 3, p. 513. July, 1946.

The authors point out the sympathetic block has become a most important branch of regional anesthesia. The sympathetic block increases the flow of blood to the upper extremities; increases pulsation, tissue oxygenation, and lymph flow. The authors feel that sympathetic block to the upper extremities has been neglected. The authors have employed this type of anesthesia for stellate ganglion with procaine hydrochloride in about 400 cases of painful, orthopedic lesions, in upper extremities. The following types of cases are listed and averages of the results obtained are mentioned in this article:

Acute subdeltoid bursitis — immediate relief in 83.3 per cent.

Periarthritis — Some 50 per cent had a good final result — 41 per cent a final fair result.

Myositis and fibrositis gave a 80 per cent good and a 20 per cent fair result.

Hypertrophic arthritis 50 per cent fair result.

Infectious arthritides 40 per cent good result; 60 per cent poor result.

Temporary relief was obtained in a high per cent of these cases, however.

Pain and swelling following fractures, such as fractures and dislocations — 100 per cent immediate relief of pain and the swelling.

Pain and swelling following trauma, such as contusions — This also gave 100 per cent relief of the pain.

Posttraumatic Causalgia and "Phantom" Pain after Amputation — the average result was pleasing with immediate relief from pain.

The authors describe, with illustrations, two techniques for the block procedures. They have tried all the approaches they could find described in the literature and have obtained the most consistently satisfactory results from modifications of the descending-infiltration technique of de Sousa Pereira. In an excellent paper, he describes the well-known anatomical features; and also points out the importance of the aponeurosis at the base of the neck, which acts as a pathway of diffusion for the anaesthetic solution from the level of the traverse process of the sixth cervical vertebra to the middle cervical and stellate ganglia. By utilizing this pathway, one can obtain consistently good blocks with needles of Wassermann or hypodermic length, instead of the usual and more lethal spinal length needle. These "short-needle" techniques have enabled the authors to do stellate blocks with greater safety, ease, and speed than is possible with any of the other methods.

In cases of recent acute lesions of the upper extremity, stellate block affords relief from pain which is almost universally gratifyiug. These patients submit to, or even seek out, consecutive blocks. That the pain is probably vasospastic in origin is suggested by the fact that complete relief follows one or more blocks at frequent intervals. Clinical substantiation is evidenced by the results obtained in acute inflammatory and posttraumatic conditions, in which the major etiological factor is known to be circulatory impairment.

In chronic cases, in which the lesions have been present until such anatomical changes as adhesions, erosion of cartilage, or abberrant calcification supervened, it is obvious that only transitory relief from pain can be obtained. Adjunctive physical therapy should be employed in such cases. The range of physical therapy tolerated is in direct proportion to the relief of pain afforded by stellate block; and, in cases showing definite but transient improvement, it may be well to consider blocking with more noxious chemicals, such as alcohol derivatives; or even employing sympathectomy.—E.D.M.

SOME OBSERVATIONS ON WOUND HEALING. Jack Mathews Farris and Thomas B. Jones. Surgery, Gynecology, and Obstetrics. Vol. 84, No. 2, pp. 203-213.

"This report is concerned with the management of wounds in a general hospital based in the United Kingdom and actively engaged in the treatment of wounded evacuated from the continent."

Following is the plau decided in management of these cases: "It was decided to make an earnest effort to close every wound either by secondary suture and, or, graft as soon as it was reasonably certain that the wound was not the site of active virulent infection. The closure of the wound was made the primary objective and the uuderlying fracture, nerve injury, foreign body, tendon injuries, or muscle defect, when present, were a secondary consideration. This policy was predicated on the premise that the best dressing for any wound is skin and the sooner it is applied the better is the ultimate prognosis of the associated injury.

"All wounds were closed as soon as possible. Some of the wounds were closed within three or four days, and many were closed during the first week. The majority were sutured or grafted between seven and fourteen days. It soon became apparent that the earlier the wounds were closed the better were the results.

"All wounds were dressed as soou as possible after admission. A simple, wet saline dressing was applied to all wounds to remove the caked sulfa crystals, vaseline, exudate, and old blood. All medication was stopped after admission, and subsequently given only in those cases iu which there were systemic signs of infection. Maximum benefit from the wet dressings was usually obtained in two or three days. As soon as it was felt that the wound was reasonably free of all gross particulate and organic matter, closure or graft was done."

The article goes on in detail and discusses the actual surgical procedures as well as citing cases to illustrate points advocated. The following conclusions are worth careful consideration:

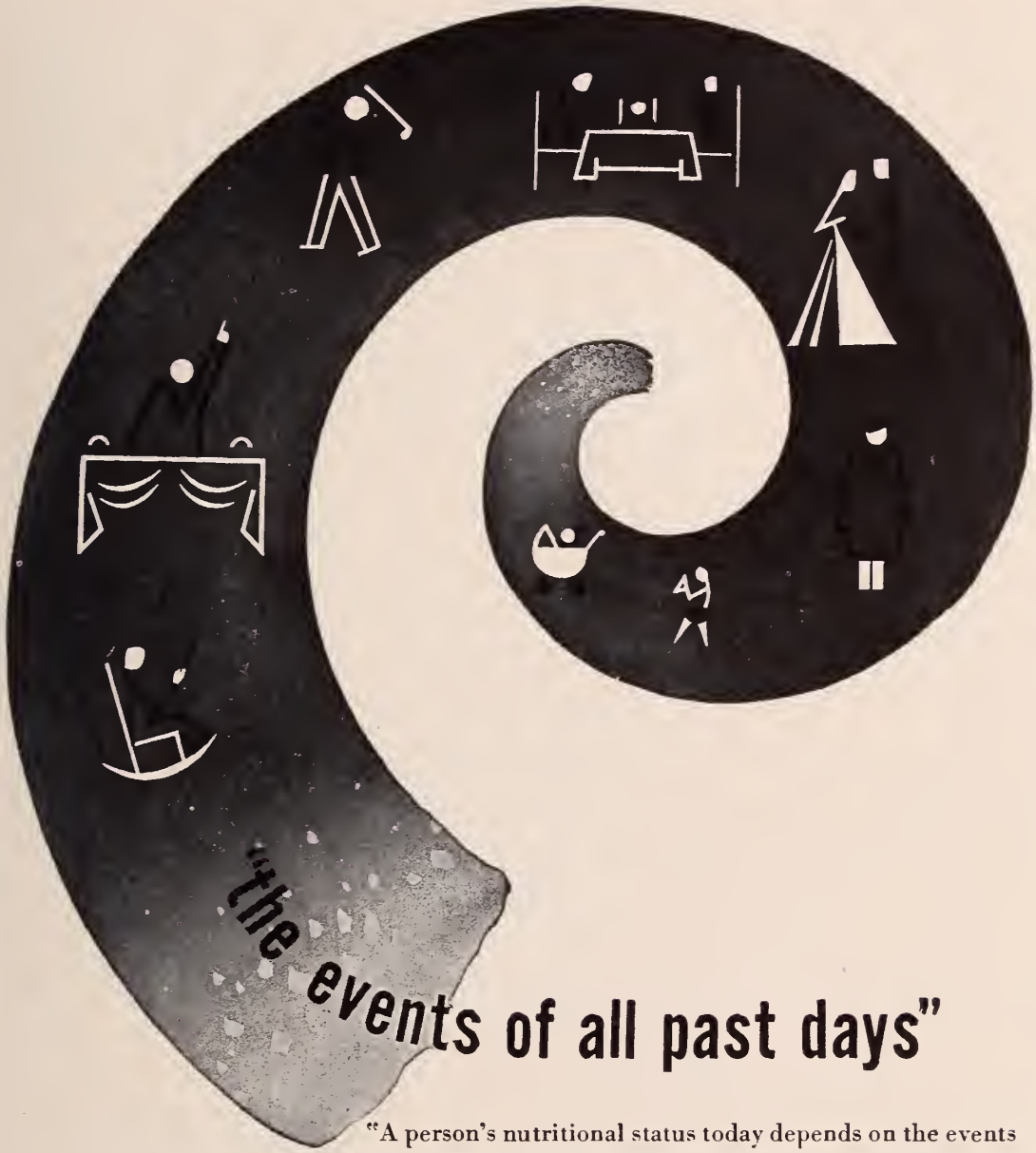
"(1) The 725 secondary wound closures of so-called contaminated wounds resulted in satisfactory healing.

"(2) The results in secondary closure are not appreciably altered by either sulfonamides or penicillin when applied locally at the time of closure.

"(3) One of the most important factors which has allowed surgeons to close compound fractures and large soft tissue defects, often times many days after the original wound, is the security afforded by the knowledge one possesses an agent (systemic penicillin and sulfonamides) which successfully combats hemolytic infection and prevents septicemia.

"(4) Secondary closure of granulating wounds can only be successfully performed when secondary debride-

(Continued on Page 214)



"the events of all past days"

"A person's nutritional status today depends on the events of all past days."[1] Slight deficiencies should not be ignored "as if they were without effect," for "partially, indeed slightly deficient diets eaten regularly and periodically over many years have their consequences."[1] Such nutritional delinquency often takes its greatest toll under the stress of illness, surgery, pregnancy, lactation, or accident. For depleted tissues, Upjohn vitamins provide a wide range of dosage forms for therapy or supplementation, in preparations adapted to oral and parenteral administration in the practice of medicine and surgery.

1 National Research Council Bull. No. 109. 1943. pp. 18-21.

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BOOK REVIEWS

ALLERGY IN THEORY AND PRACTICE. Robert A. Cooke, M.D., ScD., F.A.C.P. 572 pp. with 43 illustrations. Price, $8. Philadelphia and London: W. B. Saunders Company, 1947.

This is a volume comprising contributions from 13 eminent workers in the field of allergy. Nine of these recognized contributors are Fellows of the Americau Academy of Allergy, and three are Fellows of the American College of Physicians. They comprise largely what is known as the "New York Group" of allergists and specialists in related subjects.

The material in this volume consists largely of the views of this group and investigatious in the field of allergy and their application in postgraduate training recently offered at the Roosevelt Hospital, New York City.

The book contains nine sections and 32 chapters, an appendix, and 43 figures and color illustrations. Each chapter is brought into harmony with the views of the senior author. The author has emphasized the concept of infection as a causative and contributing factor in many phases of allergy, particularly of the respiratory system. He is the chief exponent of this theory. The presentation is well organized, well presented, and well supported.

The foreword, "Medical Education and Allergy," is excellent in that it gives concisely but briefly an outline for education in allergy, which is recognized by the author as being inadequate in most medical teaching institutions. One of the aims of this book is to compensate for this inadequacy through self education. It is also the author's aim "to make this book a useful one to those interested in the practical application of allergy in general practice and to students of allergy as well as to the scientifically minded who find allergy an alluring subject on account of the intricacies of its immuuologic phases." In this the author has not wholly succeeded, because the text is extremely technical in some phases and very elementary in others. It seems a little too complicated for general practitioners and students, but excellent for those with experience and training in allergy.

The nomenclature is simplified and well revised, excluding many pet terms used by various authors which have tended to complicate the literature and make it difficult to understand.

The chapter on food allergy is conspicuous because of its brevity. There is some repetition which is unavoidable where so many contributors are involved. Some of the phases of allergy which are given briefly in most books dealing with allergy in general are excellently and thoroughly presented in detail in this book, namely: pathologic anatomic aspects of allergy, immuno-chemistry, infectious allergy, hyperplastic rhinitis, allergy of the skin, cardiovascular allergy, allergy of the nervous system, allergy of the eye.

On the whole the book covers well the most recent accepted advances and views of the field of allergy and is a valuable addition to the library of anyone dealing with any phase of allergy.

The publishers are to be commeuded on the excellent quality of the paper, printing, and binding of the book, and the authors ou their excellent presentations of the subject matter.—Johnny A. Blue, M.D.

ELECTROCARDIOGRAPHY. Louis N. Katz, M.D. 883 pp. including index. Philadelphia: Lea & Febiger.

Dr. Katz' book is a very complete and almost eucyclopedic treatise on the subject of electrocardiography. It belongs in the library of every physician who is interested in the diagnosis and treatment of heart disease. The principal asset of this book is its completeness. Most text books in the past have dealt with this subject in a rather fragmentary fashion; some fields have been covered excellently, while others have been completely neglected. The subject of precordial leads, in particular, is well covered and the treatment is up-to-date. The book is profusely illustrated with many examples of almost every conceivable condition. The bibliography has been well worked out and is quite complete. The usefulness of many text books is impaired by an inadequate index. A complete and detailed index is a most valuable feature of this text and greatly enhances its usefulness and the availability of the information.

The principal fault is a tendency to be somewhat overly dogmatic, and an attempt is made to draw lines somewhat too sharply in fields where there is too much overlapping. For example: The attempt to draw the line rather sharply between left axis shift, a normal variation, and left ventricular strain. Experience has, I believe, shown that however desirable this differeutiation may be, it cannot be done with any degree of reliability with the criteria which are presently available. However, faults such as this are very minor when compared to the over-all excellence of the book.—H. A. Ruprecht, M.D.

EXERCISES IN ELECTROCARDIOGRAPHY. Louis N. Katz, M.D. 288 pp. including index. Philadelphia: Lea & Febiger.

This book by Dr. Katz is a companion volume to his text book on *Electrocardiography.* This consists of a series of a hundred unknown electrocardiograms which are available for study, and which may then be compared with the interpretation by the author and these findings coordinated with the physical findings, clinical course, and often autopsy findings on these patients. A wide variety of records is shown and in most instances these are quite typical of the conditions which they represent. This book should be invaluable to the beginner.—H. A. Ruprecht, M.D.

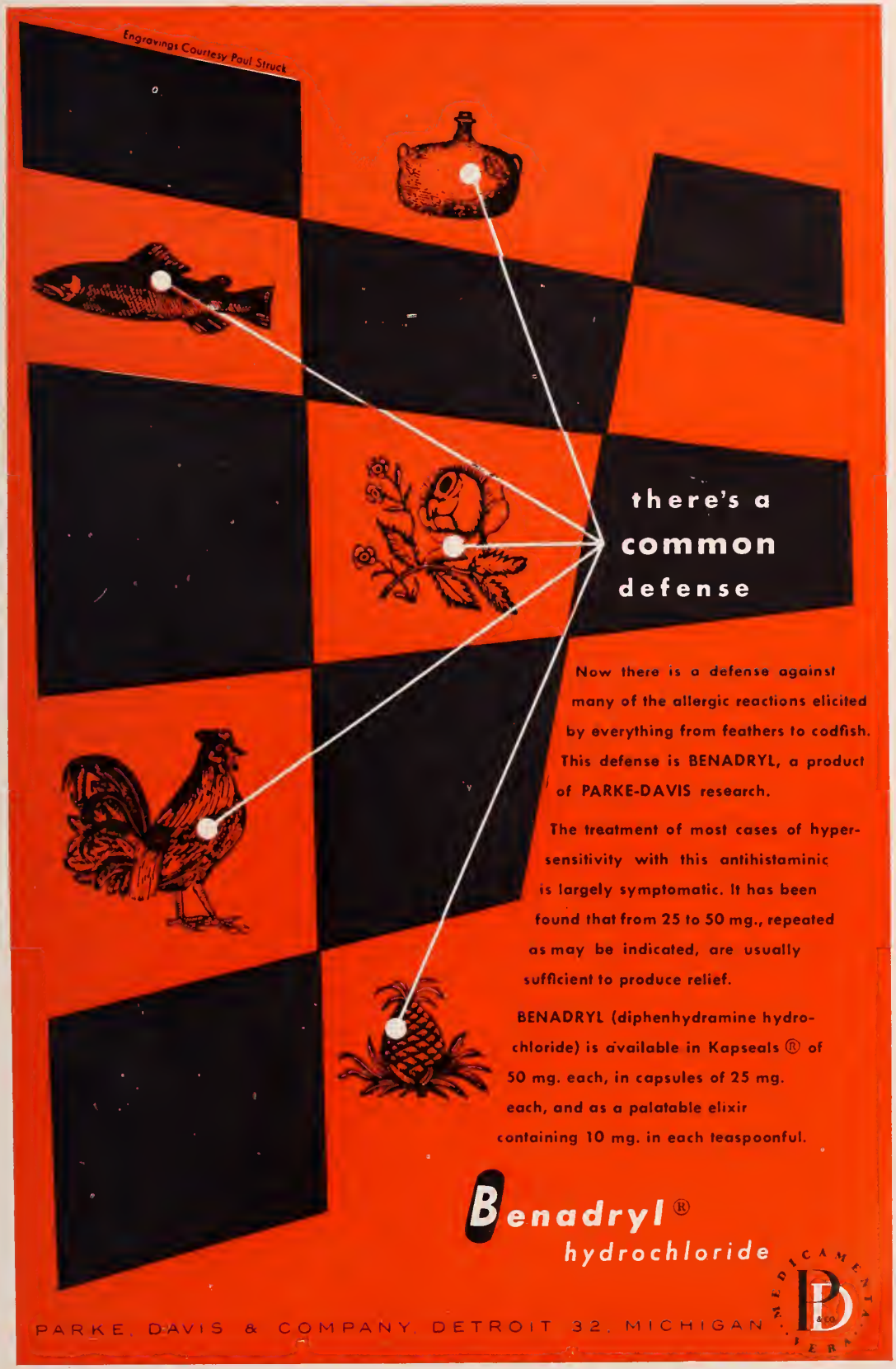
ABSTRACTS

(Continued from Page 212)

ment is carried out. The capacity for regeneration and repair as related to wound healing involves certain fundamental principles. Present experiences indicate more than ever the importance of a sound knowledge of the basic fundamentals of surgical principles. Careful debridement skillfully carried out is still the one most important single treatment for wounds. Without it no supplementary form of treatment will succeed."—J.F.B.

KEY TO ABSTRACTORS

E.D.M. Earl D. McBride, M.D.
J.F.B. John F. Burton, M.D.


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MEDICAMENTA VERA

OFFICERS OF COUNTY SOCIETIES, 1947

COUNTY	PRESIDENT	SECRETARY	MEETING TIME
Alfalfa	L. R. Kirby, Cherokee	L. T. Lancaster, Cherokee	Last Tues. each Second Month
Atoka-Bryan-Coal-Johnston	J. S. Fulton, Atoka	A. T. Baker, Durant	
Beckham	O. C. Standifer, Elk City	J. E. Levick, Elk City	Second Tuesday
Blaine	Fred Perry, Okeene	Virginia Curtin, Watouga	Third Thursday
Caddo	George W. Conover, Jr., Anadarko	Edward T. Cook, Jr., Anadarko	Third Thursday
Canadian	G. L. Goodman, Yukon	Jack W. Myers, El Reno	Subject to Call
Carter	J. M. Gordon, Ardmore	C. D. Cunningham, Ardmore	Second Tuesday
Cherokee	P. H. Medearis, Tahlequah	R. K. McIntosh, Jr., Tahlequah	First Tuesday
Choctaw-McCurtain-Pushmataha	Reed Wolfe, Hugo	Fred D. Switzer, Hugo	
Cleveland	Orville Woodson, Norman	T. A. Ragan, Norman	Thursday nights
Comanche	Leslie T. Hamm, Lawton	Byron W. Aycock, Lawton	Third Tuesday
Cotton	G. W. Baker, Walters	Mollie Seism, Walters	Third Friday
Craig	P. L. Hayes, Vinita	J. M. McMillan, Vinita	
Creek	O. H. Cowart, Bristow	F. H. Sisler, Jr., Bristow	Second Tuesday
Custer	Willard H. Smith, Clinton	D. W. McCauley, Clinton	Third Thursday
Garfield	Francis M. Duffy, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	Thomas F. Gross, Lindsay	John R. Callaway, Pauls Valley	Weduesday before Third Thursday
Grady	R. R. Coates, Chickasha	Wesley W. Davis, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	F. P. Robinson, Pond Creek	
Greer	Dwight D. Pierson, Mangum	J. B. Hollis, Mangum	
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis	First Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams McCurtain	
Hughes	Clyde Kernek, Holdenville	H. V. Schaff, Holdeuville	First Friday
Jackson	E. W. Mabry, Altus	J. P. Irby, Altus	Last Monday
Jefferson	J. A. Dillard, Waurika	O. J. Hagg, Waurika	Second Monday
Kay-Noble	E. C. Mohler, Ponca City	Edwin Yeary, Ponca City	Second Thursday
Kingfisher	John R. Taylor, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	J. Wm. Finch, Hobart	R. F. Shriner, Jr., Hobart	
LeFlore	John H. Harvey, Heavener	Rush L. Wright, Poteau	
Lincoln	J. S. Rollins, Prague	Ned Burlesou, Prague	First Wednesday
Logan	James Petty, Guthrie	J. E. Souter, Guthrie	Last Tuesday
Mayes	E. H. Werling, Pryor	Paul B. Cameron, Pryor	
McClain	I. N. Kolb, Blanchard	W. C. McCurdy, Jr., Purcell	
McIntosh	F. R. First, Sr., Checotah	W. A. Tolleson, Eufaula	Third Thursday
Muskogee-Sequoyah-Wagoner	W. P. Fite, Muskogee	William N. Weaver, Muskogee	First Tuesday
Okfuskee	L. J. Spickard, Okemah	M. L. Whitney, Okemah	
Oklahoma	F. Redding Hood, Oklahoma City	George E. Kimball, Oklahoma City	Fouth Tuesday
Okmulgee	John Cotteral, Henryetta	C. E. Smith, Henryetta	Fonrth Tuesday
Osage	R. O. Smith, Hominy	Gayfree Ellison Pawhuska	Second Monday
Ottawa	B. Wright Sheltou, Miami	W. Jackson Sayles, Miami	Third Monday
Pawnee-Payne	C. H. Haddox, Pawnee	C. W. Moore, Stillwater	Second Thursday
Pittsburg	Homer C. Wheeler, McAlester	Edward D. Greenberger, McAlester	Third Friday
Pontotoc-Murray	E. D. Padberg, Ada	Ollie McBride, Ada	First Wednesday
Pottawatomie	Charles F. Paramore, Shawnee	Clinton Gallaher, Shawnee	First and Third Saturday
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	
Seminole	Claude B. Knight, Wewoka	Mack I. Shanholtz, Wewoka	
Stephens	E. H. Lindley, Duncau	E. C. Lindley, Duncan	Third Wednesday
Texas	Daniel S. Lee, Guymon	E. L. Buford, Guymon	Third Weduesday
Tillman	G. A. Tallaut, Frederick	O. G. Bacon, Frederick	
Tulsa	E. O. Johnson, Tulsa	John E. McDonald, Tulsa	
Washington Nowata	Thomas Wells, Bartlesville	L. B. Word, Bartlesville	Second aud Fourth Monday
Washita	A. H. Bungardt, Cordell	Aubrey E. Stowers, Sentinel	Second Wednesday
Woods	C. A. Traverse, Alva	O. E. Templin, Alva	
Woodward	Myron England, Woodward	C. W. Tedrowe, Woodward	Last Tuesday Odd Months Second Thursday Even Months

THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

ONE HUNDRED YEARS OF ORGANIZED MEDICINE

The waves lashing the beach at Atlantic City with a million years of froth to their credit may laugh at the idea of a centennial celebration. But when we consider the progress of the past century as compared to the eons through which the Indians passed, singing, dancing, drumming, and rattling evil spirits away, the progress of American medicine has been phenomenal.

Even though Cabeza de Vaca, the shipwrecked Spaniard, initiated surgery on this continent in the present state of Texas with a sharp stone in the early part of the sixteenth century, there was little constructive progress before the American Medical Association was organized. The first American medical history was published in 1828. This was James Thacher's *American Medical Biography.* The next was by Stephen West Williams in 1845. This biographical material, dealing with the hardy, courageous physicians chiefly along the eastern seaboard, indicated that a solid foundation was being prepared for the American Medical Association, which was organized in 1847. It is to be hoped that when the modern medical great enter upon their centennial felicitations in Atlantic City this June, they will not forget the pioneer American physicians who went through "hell and high water" to give the profession stability of character and to prepare the way for scientific progress. Aside from the epoch-making discovery of general anesthesia, which was demonstrated at the Massachusetts General Hospital one year before the American Medical Association was founded, and aside from the control of yellow fever, American medicine has made no epochal advances but has contributed much toward national and international weal. It has given to the people of the United States the best medical service to be had anywhere in the world today.

The question arises, has the American Medical Association always made the most of its opportunities? Carried along with the last half century's scientific progress, the American Medical Association, in the opinion of the writer, has lost a great opportunity in the field of legitimate lay publicity. It was natural to be satisfied with the progress of scientific medicine and to assume public satisfaction. But the truth though crushed to earth is rising. The mass ignorance concerning the meaning of medical progress and its value to the individual and to society is appalling. In retrospect it is natural to wonder if the American Medical Association might not have more effectively educated the public as to the personal and general value of medicine as practiced in the United States today. The American Medical Association could have gone directly to the public with a sustained educational program and indirectly through the general practitioner who needed to be alerted and stimulated. Perhaps it is not too late. The next hundred years will tell.

THE SPECIALTY PROBLEM

Physicians who have not been certified by a specialty board are being dropped from the staff of hospitals here and there over the country and from the staff of all the hospitals in one large city of the Ohio River Valley. It is argued that these hospitals are teaching hospitals in that they are responsible for the training of house officers.

This is a cowardly gang technique without real sincerity, for incompetents could be excluded, limited, or dropped, and competent men retained whether they have been certified or not. The bricklayer can't drive a nail, the plumber can't saw a board — Samuel Gompers never dreamed of such specialized skills and such a closed shop as medicine is building.

There is before us the example of another health service group which is over-educating itself — the nursing profession. Standards for nurses' training have been increased to such a peak that all but twelve hospitals in Oklahoma have had to close their schools — all this, while hospitals are closing badly-needed floors and wings for lack of nurses. There has been no demonstrable effort in this state at least to train auxiliary nurses. As a matter of fact it is forbidden for a hospital which has a training school to enter into such a training program.

Have we learned nothing from this experience? Are we going to use the specialty boards for the same ruinous program? Every young man coming out of school sees the handwriting on the wall and wants to be a specialist. Who is going to look after the people — all 140 million of them, not just the few million who live in cities whose hospitals have interns and training schools? Who is going to determine whether we have government medicine? Not this party or that party but those same 140 million people. They want a doctor and all of our efforts at public relations will be no good unless they have a doctor.

Oklahoma is unspoiled largely because her people are Christian people who believe in immortality and that Time is infinite. We believe that in 10, 20, 50 years we the people will be on much surer footing at our present rate of speed than if we try to make things over today. We have some poor doctors but they won't last forever, and we are getting younger men with better training to take their places. We are trying to help all the doctors, and especially the general practitioners with their postgraduate education by County Society meetings, the State Society meeting, the Clinical Society, the various hospital staff meetings, and the State Society postgraduate program. We could, however, require attendance at the county meetings as a necessity for maintenance of membership.

We have been conscious of our public responsibility and have established Blue Cross and Physicians Service. Both plans are serving the people well and will serve better as more people are embraced. They are genuinely nonprofit organizations which depend for their success on the excellence of their product, the good will of the people who hold contracts with them, the good will of the hospitals, and the good will of the physicians.

Such a freeze out can only promote ill will. Both plans would be badly embarrassed by such a specialty program. The responsibility for advising in any action by one group which affects other health service groups as well as the public should rest in a joint advistory committee. The nurses, doctors, dentists, Blue Cross, Physicians Service, hospitals, and the public should be represented. Subsidized groups and groups with very special interests need appear only for consultation when requested. When the urge to deprive the general practitioner and his patient of hospital facilities reaches Oklahoma, the matter should be studied by this committee before being acted on by any hospital or group of hospitals.

If such a committee had the public in mind, there are many knotty problems it could help solve. It could help solve the problem of training auxiliary nurses. It could help direct funds available for health services into the most useful channels. It could help solve the problem of special services, such as roentgenology, pathology, etc., to groups of small hospitals in contiguous areas. It could aid in the prevention of duplication of health services. It should be in an admirable position to advise legislative committees about health legislation.

It appears high time that we abandon the "brain trusters" in medicine as a guide to policy. We are indebted to them for scientific and technical knowledge, but we must resist any effort to deprive the public of the general practitioner. Nor can we deprive him of adequate hospital facilities. It is sincerely hoped that no Oklahoma hospital, not even excepting the University Hospital, will go off the deep end and exclude men who have served them and the people faithfully in the past but who have not become specialists on paper.—B.H.N., M.D.

WHITHER?

Though thinking people may be whistling in the dark, they are very uneasy. Few will deny that the world has lost its way. The lost are not lambs to be brought in by the shepherd. The church seems to be helpless; the guideposts have been ignored and nobody seems willing to turn back in search of the way.

Ibsen, despairing of his plan to reform the world through his dramas, turned to the medical profession for characters because it exemplified the spirit which should characterize a reformed world.

The New England Journal of Medicine of April 24, 1947, carries an editorial on "The Quality of Mercy." In the last paragraph we find this striking challenge which is in line with the above theme:

"The profession of medicine, freed to a large extent from mystery and magic, has shown itself for centuries to be the calling of the Samaritan. It has combed the battlefield unarmed, seeking only to lighten suffering where it might be found. Its followers are in a position where, by themselves and through their organized fellowships, they must expect to share leadership, to set examples and to stir consciences in still another attempt to shape man's destiny according to a pattern of universal tolerance and mercy."

A few evenings ago, Waldo Stephens, speaking in behalf of the Oklahoma Research Foundation, stressed the fact that the medical profession, clinging to its Hippocratic principles, represents the one extant group practicing what Christ preached and that the physicians may yet help a sick world find its way. This great tribute to the medical profession implies the perfect integration of the art and the science of medicine. There is a Chinese proverb which says, "The superior doctor serves the Nation; . . . the inferior doctor treats [only] physical ailments."

In the editorial columns of the Journal, repeatedly the Editors have expressed some concern about present professional trends away from general practice and toward materialistic aims instead of a drive toward patient-welfare and service to humanity on a broad scale. Physicians should think seriously of medicine's unique position in the United States today. They should ever bear in mind the fact that today as never before the eyes of the world are on the medical profession. Can any one physician afford to offend or oppress a single member of society? For the sake of the profession and the people, every physician must live up to his opportunities and faithfully discharge his obligations. There is no place in the profession for the physician who places his own interest before that of the patient who has entrusted to him his health and possibly his life. Opportunity is knocking. The young doctor's fate rests upon his response to this opportunity.

THE STATE MEETING

The Oklahoma State Medical Association 1947 Meeting has passed into history. The progress of medicine in Oklahoma during the past ten years is most gratifying. Medicine's sustained interest in public weal with its program of cooperation with allied professions is most commendable. This program is expressly for the benefit of the public and not with any selfish motives on the part of the participating professions. The plans for cooperation in the interest of the people and the careful integration of policies and purposes of these professions should effectively forward their respective objectives and help to more soundly establish their humanitarian positions in society. No intelligent individual could hear the report of the Oklahoma State Medical Association Council and witness the response of the House of Delegates without being proud of the physicians of Oklahoma. The outspoken suppression of selfish interests in behalf of human welfare humbly but energetically pursued was most inspiring.

CHARLES B. TAYLOR LECTURESHIP

In appreciation of professional services for her deceased husband, Mrs. Sadie H. Edwards has given the Board of Regents of the University of Oklahoma securities approximating $5,000.00. The interest and profits accruing are to be employed in the establishment of a lectureship in connection with the University School of Medicine. The terms of the gift provide for a Charles B. Taylor Lectureship Committee, consisting of Charles B. Taylor, Basil A. Hayes, and the Dean of the Medical School. The lectures will deal with the subject of urology, unless in the discretion of the Committee other subjects are designated. This worthy example expressing the relationship of a faithful physician and a grateful patient deserves wide publicity and should stimulate the members of the State Medical Association to be on guard for similar opportunities to serve humanity.

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SCIENTIFIC ARTICLES

ON CURRENT CONCEPTS OF THE ETIOLOGY AND PATHOGENESIS OF PERIARTERITIS NODOSA*

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Almost a century has passed since the first complete description of the pathological findings and clinical correlation of periarteritis nodosa was made by Kussmaul and Maier[1]. That the disease may have been recognized almost two centuries ago is suggested by Schreiber[2]. Rokitansky[3] is credited with the first description of the microscopic pathology of the disease. Interest lagged in the disease until the early part of the twentieth century when the first and second cases were reported in the United States by Dickson[4] in 1907, and Longcope[5] in 1908.

During the next thirty years the incidence of case reports increased, and in 1938, Harris[6] et al stated that a total of 300 cases had been reported, and that about one-third of these appeared in the English literature.

Of extraordinary importance were the observations by Rich[7], in 1942, of the appearance of vascular lesions characteristic of periarteritis nodosa in the viscera of patients who, shortly before death, had hypersensitive reactions following therapeutic administration of rabbit or horse serum, and, in some instances, sulfonamides. Following these postmortem observations Rich and Gregory[8] demonstrated in experimental animals that periarteritis nodosa is a manifestation of hypersensitivity. The clinical manifestations are so protean that relatively few antemortem diagnoses are made although during the last few years the clinical diagnosis is being made with greater frequency. The attacks of pain, widely disseminated in the extremities, the trunk, and the viscera, vary in intensity, in duration, and in painfulness. The arterial lesions (1) involving the heart, give rise to stabbing pain in the precordium, tachycardia, gallop rhythm, arrhythmias, pulmonary edema, and dyspnea; (2) of the kidneys, produce pain in the lumbar region, hematuria, albuminuria, cylinduria, pyuria, and hypertension; (3) of the testes, produce local pain and tenderness; (4) of the gallbladder, cause severe pain, tenderness and rigidity of the upper right quadrant associated with nausea and vomiting, and even an enlarged palpable and tender gallbladder; (5) of the pancreas, is manifested by excruciating upper abdominal and back pain, nausea and vomiting, board-like rigidity, and a diabetic sugar tolerance; (6) of the gastro-intestinal tract, precipitate nausea, vomiting, diarrhea, abdominal cramps, and melena; (7) of the brain and meninges, cause headaches, convulsions, stupor, coma, hypo-active, absent, or hyperactive reflexes, and sudden death; (8) of the muscles and nerves of the extremities, produce pain, constant and shooting in character in the legs, thighs, arms, and forearms, exquisite tenderness of the muscles, and marked hyperaesthesia of the overlying skin and patchy disturbances of the temperature and tactile senses. The onset may be sudden or insidious, preceded by an infection in some cases but without such a history in others. There may be transient swollen, painful, tender joints at the onset. Usually there is fever, and leukocytosis which may be very high, and sometimes eosinophilia develops as the disease progresses. At the onset, skin rashes of the scarletinoform type, which may become generalized, or purpuric lesions and diffuse ecchymotic areas and nodules may occur. All of these signs and symptoms, which are inconstantly present, clearly indicate the bizarre picture of periarteritis nodosa.

Clinical students of periarteritis nodosa have recognized certain additional facts regarding the disease. Thus, they noted that it may occur at any age, in infants[9], as well as

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in older children[10] and in adults. They recognized that the disease may occur sporadically anywhere. They learned too, that the syndrome may be acute or chronic and although the mortality rate is extremely high and that the process may be rapidly fatal, some patients recover without apparent residual effects, whereas others recover with residual renal damage and hypertension. They found that the disease was met with in both sexes, although it predominates in males, and that it may develop in the course of certain infections[11 12] or intoxications[13]. To quote McCall[13], "It seems perfectly clear that the pathologic lesions herein described show marked similarity, so much so that we believe these arterial lesions point to a disease of the blood vessels, due either to a specific bacterial agent, or a specific vascular reaction to some unidentified toxin or other harmful mechanism." However the disease sometimes occurs in persons who are otherwise apparently healthy.

The following case of periarteritis nodosa illustrates many of the diagnostic difficulties encountered at the onset and during the early course of the disease. A 28-year-old colored soldier with one and one-half years of military service was admitted to the Gardiner General Hospital on June 21, 1945, complaining of nausea, fever, pain and swelling of the wrists and ankles, pain in the knees, and swelling of the eyelids. The essential but definitely confusing points in his past history were as follows: (1) He had worked as a painter in 1942. (2) On entry into the service he was found to have syphilis, with a positive blood serology and negative spinal fluid for which he received 33 injections of marpharsen and 12 injections of bismuth subsalicylate. The last bismuth subsalicylate injection was administered 24 days prior to entry to the hospital. (3) Three weeks prior to the onset of his present illness he had a mild urethral discharge which lasted only a day or so, for which he took two tablets, presumably sulfadiazine. (4) For several months the patient had been having frequent generalized headaches for which he had been taking Anacin and BC headache powders.

The symptoms of which he complained on entry had been present for only 48 hours. On entry, the examination revealed the following positive findings: temperature, 100.2°; pulse 80; B.P. 158/85; a few erythematous macules over the lower extremities; a few old scars that had the appearance of healed ulcers over the left tibia; puffiness of the eyelids; pitting edema over the hands, the wrists, the feet, and the ankles without redness or increased local temperature. Negative neurological examination. The laboratory findings included normal blood counts and differential counts; slightly elevated sedimentation rate; normal NPN, total protein and A G ratio. Two urine specimens were examined on the second hospital day and both were negative on chemical and microscopic examination, except for a trace of albumen in one. During the second and third hospital day, nausea continued and vomiting and right lumbar pain developed; the edema of the wrist and ankles had subsided. On the fourth hospital day he developed excruciating pain in both upper extremities and in the left thigh and leg anteriorly; this was associated with muscle and or nerve tenderness. At this time, because of the fact that in sickle cell anemia multiple widespread thrombosis of blood vessels producing infarction in the visceral and the skeletal systems manifested by disseminated pain occur, studies for the sickling of red blood cells were made. Sickling was not observed. During the ensuing few days he had periods of transient reduced responsiveness. On the seventh day he developed pain in the right epigastrium associated with upper right rectus rigidity. These symptoms and signs were so striking that acute cholecystitis was suspected as an additional manifestation of the disseminated process.

The question of the role of heavy metals was raised. He had recently received antiluetic therapy for forty-five weeks. The results of a spinal fluid examination further clouded the picture. The Wassermann was reported as doubtful in two dilutions. At a later examination the spinal fluid was normal. During the second week of his disease the course of his illness was unchanged. The severe excruciating pain in the arms, forearms, legs, and thighs, the intermittent pain in the epigastrium, the hypertension and low grade fever persisted; the urinary findings were those of active nephritis and the anemia progressed. During one of our postgraduate wartime meetings, Drs. N. E. Gilbert and Larry Hines saw this patient and suggested muscle biopsy, sections of which are illustrated in Figures 1 and 2. Five months later the patient looked well and felt fine. The blood pressure was normal and the only residuals of the disease that remained were those related to the kidneys as evidenced by the persistence of small quantities of albumen and casts of the chronic variety. However, the serum proteins, nonprotein nitrogen and

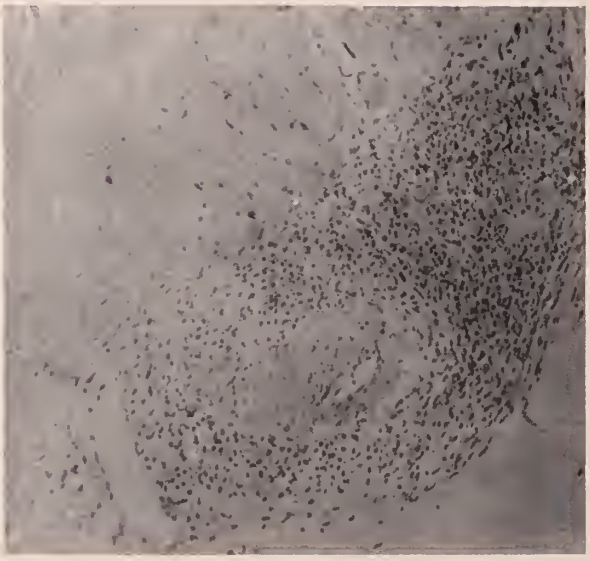


Figure 1. Artery of triceps muscle of Case Report. Biopsy obtained about two weeks after apparent onset of illness showing infiltration and necrosis of the arterial wall and extreme perivascular infiltration.

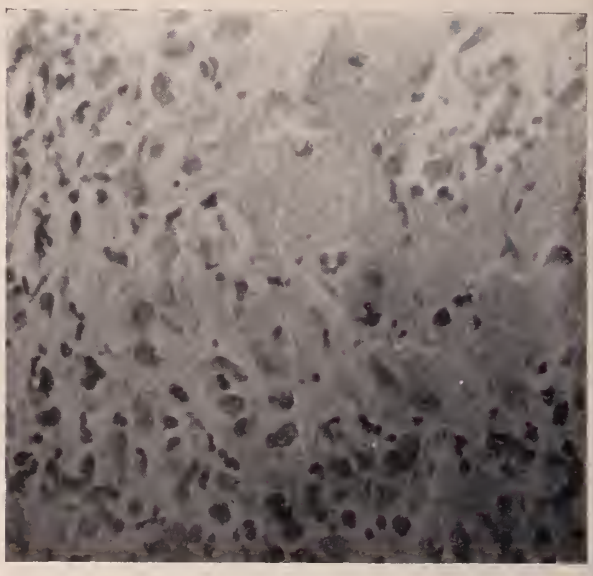


Figure 2. A high magnification of artery demonstrated in Figure 1 which clearly demonstrates swelling of the intima, edema and necrosis of the media with fragmentation and fraying of the elastica. Scattered throughout the vessel wall and the perivascular area are large numbers of monoculear and polymorphonuclear cells and a few eosinophils.

urea clearance (96 per cent) tests were within normal limits.

Briefly, the characteristics of periarteritis nodosa lesions are as follows: the early lesions show edema, focal in distribution, of the intima and media of the small arteries and arterioles. At at later stage, necrosis of the media occurs, the muscular and elastic layers being destroyed, and as Rich[8] says "often the necrotic tissue becomes fused into a smudgy or hyaline eosinophilic mass." Mononuclear and eosinophilic cells may infiltrate all layers of the vessel wall. For this reason, the term periarteritis nodosa is a misnomer. Only when the media undergoes necrosis with aneurysmal dilatation is the term "nodosa" applicable. Rich emphasizes the fact that the occurrence of aneurysmal lesions are the exceptions. Focal panarteritis is more accurately descriptive of most of the lesions. The early lesions may progress from the acute exudative stage to a fibroblastic proliferation, resulting in narrowing of the vessel channel, thrombus formation, infarction, and in some instances, healing takes place with scar formation. It is to be emphasized for reasons to be subsequently presented that the earliest lesions are characterized by edema of the media and intima.

From the foregoing brief description of the pathology of periarteritis nodosa, it is quite clear that the manifestations are so bizarre and protean that it may be confused with many other diseases. Middleton[11] quotes Van Haun as writing that it has been mistaken for "trichinosis, Werlof's disease, typhoid fever, miliary tuberculosis, polymyositis, arteriosclerosis with sclerosis of the kidneys, neuritis multiplex, gastro-enteritis, pyemia, hemorrhagic nephritis, serositis tuberculosa, influenza with renal hemorrhage, and purpura hemorrhagica." To this already large list of diseases I would add meningoencephalitis, arsenic poisoning (Middleton's Case No. 1)[11] and lead poisoning, acute rheumatic fever and sickle cell anemia. Also, acute suppurative cholecystitis, acute surgical abdomen and acute renalopathy leading to nephrectomy, have been mistaken for periarteritis nodosa.

Though the smaller arterial and the arteriolar involvement in periarteritis nodosa is widespread, it is clearly evident that it is not a uniformly diffuse involvement, but is definitely focal. If then, as seems necessary, an elective involvement of the smaller arteries and arterioles occurs, how can such a selective tissue alteration be thought of as originating? Some of the early writers have assumed that syphilis was the cause, but this etiological concept was subsequently clearly disproved. Bacteremia, especially streptococcal, as a cause has been suggested but blood cultures and cultures obtained from diseased tissues have been negative. Another theory by Van Haun[15] assumes a filtrable virus as the cause, and he attempted to reproduce experimental periarteritis nodosa by the injection of blood from a patient into guinea pigs. The theory held many years ago by

Longcope[5], of a specific bacterial agent or a specific vascular reaction to this, led to a search for the toxic substance or agent.

Of far greater importance were the views held by Ophuls[16], and Middleton[11] who, to quote the latter, said, "In view, therefore, of the considerable evidence from many sources of the clinical, pathologic and bacterial relationship of rheumatic fever and periarteritis nodosa, the suggestion seems warranted that the latter be placed in the rheumatic group." The concept of Swift[17] and Coburn[18] that the lesions of rheumatic fever represent the effects of hypersensitivity reactions to bacterial products has been generally accepted. For a long time no convincing experimental evidence was forthcoming that this hypothesis was correct. However, in 1943, while observing the sections obtained from animals which had been subjected to a state of hypersensitivity of the serum sickness type in the experimental production of periarteritis nodosa, Rich and Gregory[8] noted lesions involving the heart valves and myocardium characterized by focal alterations in the collagen of the connective tissue, focal and diffuse inflammatory lesions, and indeed focal accumulations of cells that in some instances closely resembled Ashoff bodies. It should be emphasized that the lesions of rheumatic fever and in some instances of periarteritis nodosa occurred under identical circumstances.

Furthermore, it should be understood that the type of hypersensitivity produced was of the anaphylactic type. The lesions were produced in rabbits by an initial intravenous injection of a large dose of horse serum, and on the 12th day an intravenous injection of a small amount of the same serum. Such characteristics of serum sickness as a definite flush of the skin of the ears and increase in temperature by the 5th or 6th day lasting for several days occurred. Skin sensitivity to horse serum developed. This is not hypersensitivity of the tuberculin type, but rather is comparable to the anaphylactic type of hypersensitivity seen following the intradermal injection of the capsular carbohydrate of pneumococcus, or Friedlanders bacillus, or the carbohydrate fraction of the tubercle bacillus, (not the protein fractions which give rise to the delayed type of reaction).

It would scarcely be profitable in an article of this sort to refer in any detail to the repeated series of studies by Rich in the directions just mentioned. It will suffice to state that his experimental studies were prompted by the following:

1. In 1942, he observed at autopsy periarteritis nodosa occurrring in four cases in a single nine month period, the patients having died following the development of serum sickness. All patients had been treated with foreign serum and sulfonamide.

2. One patient, diagnosed by biopsy, had lesions characteristic of periarteritis nodosa who had had only serotherapy.

3. One patient developed periarteritis nodosa following a course of sulfonamide therapy.

4. An additional case of periarteritis nodosa in a patient who, following a biopsy of a carcinomatous lesion of the scrotum, was subjected to a radical operation and to whom was administered, pre and post-operatively, sulfathiazole for 16 days. Sections of the tissue obtained before, and at the time of the operation showed normal vascular structure, but at autopsy, fresh lesions of the periarteritis nodosa were encountered in the tissues at the operative site and elsewhere throughout the body.

5. That, as noted in the accompanying chart, 15 cases of periarteritis nodosa came to autopsy at the Johns Hopkins Hospital between 1936 (the year in which we began to use sulfonamide) and 1941, in contrast to only six cases in the period between 1916 and 1936. At a later date a case of periarteritis nodosa caused by hypersensitivity to iodine was reported by Rich[21].

It is highly probable that the basic factor in rheumatic fever, rheumatoid arthritis, Schonlein's disease, Henoch's purpura, and some forms of glomerulonephritis represents the effects of antigenic substances (toxins from bacteria) on sensitized tissue. The latter was suggested many years ago by Longcope, et al[19] who pointed out that the lesions

Table 1*

CASES OF PERIARTERITIS NODOSA, DEPARTMENT OF PATHOLOGY, THE JOHNS HOPKINS HOSPITAL

	Cases	
5 years 1916-1920, 1,902 autopsies	1	
5 years 1921-1925, 2,561 autopsies	1	
5 years 1926-1930, 2,774 autopsies	2	16%
5 years 1931-1935, 2,799 autopsies	2	
Sulfonamides introduced 1936		
5 years 1936-1940, 2,628 autopsies	15	
3½ years 1941-July, 1944, 1,855 autopsies	17	84%
	38	

*Permission for using this Table was granted by Professor Arnold R. Rich, Professor of Pathology, The Johns Hopkins University School of Medicine and the Institute of Medicine of Chicago.

in some forms of acute glomerulonephritis were not directly related to the quantity of toxin arising from associated streptococcal infections, for some patients, as noted by Trask and Blake[20], whose urine contained large quantities of streptococcal toxin, failed to develop nephritis, whereas others with small quantities of toxin and whose infection was graded as mild, developed severe acute glomerulonephritis. To this list of diseases, the pathogenesis of which involves a state of hypersensitivity, I feel should be added periarteritis nodosa. The antigens may be organic chemicals, such as toxins of bacteria or the carbohydrates fraction of bacteria on the one hand, or totally unrelated inorganic chemicals, such as sulfonamides, iodine, etc. These inorganic chemicals may combine with proteins of the body and act as haptens and in this way serve as antigenic substances.

It has recently been stated[22] that reports dealing with the subject indicate better recognition of the disease rather than an increasing incidence. The clinical diagnosis of periarteritis nodosa has improved in recent years, and more cases are being diagnosed clinically now than formerly. However, it is equally true, there has been a decided increase in the number of cases of periarteritis nodosa at autopsy, and the majority of these cases have not been diagnosed clinically. This increase in cases at autopsy has not been due to increased attention or increased skill in the diagnosis of the condition, for periarteritis nodosa has been well recognized pathologically for a good many years.

I have recently been informed by Colonel John E. Ash, director of the Army Medical Museum, that from 1942 to April, 1946, a diagnosis of 138 cases of periarteritis nodosa has been made by his department. Of these 138 cases, the vast majority represent diagnoses at autopsy, but several were diagnosed by biopsy. Since there have been a total of 37,000 autopsies performed this would give an incidence of about 0.37 per cent. This does not reflect the exact incidence of the disease for the reason that Service Command laboratories perform as auxiliary Army Medical Museums and these laboratories are not required to forward all biopsy material to the Army Medical Museum in Washington. The fact that it has been clearly shown by Rich that a striking increase in the incidence of periarteritis nodosa has occurred since the advent of sulfonamide therapy and since the cases referred to by Col. Ash have occurred during the last four years, and furthermore, since it has been clearly demonstrated that periarteritis nodosa in some patients has been caused by the sulfonamides, it is indeed timely to again sound a warning against the indiscriminate use of these drugs. It is not implied that sulfonamides and other chemicals account for the marked increase in the incidence of periarteritis nodosa but it is evident that they have been the responsible agents in some cases.

From this brief review of the clinical manifestations of periarteritis nodosa it seems clear that no one single agent, bacterial or chemical is responsible for the production of its lesions. That the same underlying link in the pathogenesis of rheumatic fever and periarteritis nodosa exists seems highly probable as suggested by clinicians many years ago and by recent experimental evidence. It is also clear that the disease may be caused by multiple etiological agents, both bacterial and chemical; and finally, it seems highly probable that hypersensitivity represents a unitary link in the pathogenesis of periarteritis nodosa.

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DISCUSSION

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Any disease which usually is diagnosed at the autopsy table is bound to have a very bad reputation as far as prognosis is concerned. Boyd, Arkin, Jager and others, however, have pointed out that the process is not always fatal and may heal without the existence of the disease being suspected.

Boyd, in his text on *Pathology of Internal Diseases,* describes three stages of the syndrome: (1) an acute stage with symptoms of an acute infection, (2) a granulation tissue stage, and (3) a healed or fibrotic stage in which the arterial wall is destroyed and replaced by scar tissue with narrowing or obliteration of the lumen. In cases of recovery, there may develop late symptoms of renal cardiac insufficiency.

A correct diagnosis is extremely difficult and nearly always impossible. As the blood vessels of most any organ may be involved, the symptoms will vary accordingly and this very complex picture might, in itself, suggest the correct diagnosis. Many case histories report symptoms of an acute abdomen, coronary occlusion, a kidney lesion, brain, lung, or extremity phenomena. Fever, prostration, sweating, and loss of weight are usually present also. Recently a patient at the University Hospital who had been complaining of peculiar areas of anesthesia and periasthesia and other neurological phenomena, died rather suddenly. This patient also had elevated temperature, leukocytosis and was very ill. Autopsy revealed very bizarre changes in the brain stem and cord. Death was attributed to hemorrhage around the suprarenal and kidney.

The etiology, of course, is unknown, but the work of Rich and others suggests that the mechanism may be of an allergic or hypersensitive nature. H. C. Hopps, of the Oklahoma University Medical School recently confirmed this work using normal sterile horse serum in albino rabbits.

It seems likely at this point that periarteritis nodosa is destined to fall in the same general etiological group as acute disseminated lupus erythematosis, Liebman-Saech's syndrome, acute glomerular nephritis, rheumatic fever, erythema nodosum, and others. It must be admitted, however, that in analyzing most reported case histories, no consistent etiological factors can be determined from these histories.

The treatment, largely by virtue of our ignorance of the etiology, must be symptomatic and supportive in nature. Diaz-Rivera and Miller in the March, 1946, Annals of Internal Medicine report recovery of a patient following the excision of a lesion from the brain.

Dr. Denny is certainly to be complimented on his paper and the diagnosis of this disease made during the patient's illness places him in the group of the enviable few. As emphasized by him, future treatment may well be along prophylactic lines.

MEET OUR CONTRIBUTORS

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DIABETES AND ARTERIOSCLEROSIS*

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The problem of arteriosclerosis in diabetes is essentially the problem of arteriosclerosis itself since any peculiarity of arteriosclerosis in the disease under discussion relates principally to quantitative rather than qualitative changes.

As Ludwig Aschoff has stated, "If arteriosclerosis were merely a phenomenon of aging, neither remedies nor prophylactic would be of any avail, for no one can escape age and death." We have much reason to hope, however, that some specific pathogenesis related to a remediable metabolic defect or trauma — either physical or chemical — will eventually become apparent. At the moment it appears that "our reason invents systems which nature eludes." Irvine Page comments that, "In short, of what has been done there is too much that is only almost true."

Arteriosclerosis is a term of almost ethereal quality — at least it appears so when one searches for a single commonly accepted definition. Its meaning, in the broad sense, is well understood by each of you, however, so that I shall present only a simple classification in order that we may know of just what type of arteriosclerosis we speak.

1. *Atherosclerosis* is considered as a lesion or disease which most often affects the aorta and its major branches, the coronary arteries and the arteries of the brain. It is characterized by the presence of intimal plaques which contain lipid material, especially cholesterol. To a lesser degree there may be thinning and degenerative changes of the media. Calcification frequently occurs. These plaques may reach considerable proportions so as to markedly narrow the lumen of a small artery, e.g., a coronary artery. They strongly predispose to thrombosis and may occasionally be displaced so as to cause sudden mechanical obstruction.

2. *Monckeberg's sclerosis* is characterized by medical calcification. It affects principally the muscular type of arteries, those of medium size such as the radial and the tibial. This change is responsible for the very firm "pipe stem" arteries which are so readily palpable in the extremities of those persons so afflicted. This lesion in itself causes no significant clinical effects since the lumina of such vessels are not narrowed nor is there any appreciable tendency to thrombosis.

3. *Hyperplastic arteriolosclerosis.* This condition is characteristic of hypertension. Certain organs, e.g., the heart and the kidneys, are diffusely affected by such a change and their function may be seriously impaired as the result.

4. *The arteritides.* These I mention only so that we may exclude them from our discussion inasmuch as syphilis, thrombo-angiitis obliterans (Buerger's disease), periarteritis nodosa, etc. are apparently unrelated to diabetes mellitus.

Our primary concern in diabetes is with atherosclerosis and the major portion of this discussion will be limited to this particular lesion.

One of the many difficulties in attempting to evaluate the interrelationship between diabetes mellitus and arteriosclerosis concerns the lack of adequate statistical data. This statement is no doubt quite a surprise to many of you familiar with this subject and you probably wonder if I have overlooked data compiled by Joslin and his coworkers. The major difficulties lie not in the lack of careful studies on diabetes, but rather with the lack of comparable data, secured following an equally careful examination, from nondiabetics. To state the problem more directly by means of a broad generalization,

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arteriosclerosis is diligently searched for in the diabetic, whereas the nondiabetic (especially of young or of middle age) must present obvious signs and symptoms before the disease is apparent. Then too, there is considerable discrepancy in data secured from diabetics, for instance, Joslin's figures on arteriosclerosis in juvenile diabetics[1] do not correlate with Wilder's experience[2]. Lawrence's study[3] of 43 children whose diabetes was of more than ten years duration tends to support Wilder's view in that he found no clinical evidence of atherosclerosis among these children. On the other hand, White[4] found x-ray evidence of arterial calcification in 19 of 104 diabetic children. She presents no data from a control group of similarly undernourished and underdeveloped children however, so that again we hesitate to draw firm conclusions.

Our best data comes from postmortem studies since it is only in this way that the greater portion of atherosclerosis can be determined and evaluated. In connection with this, I believe that x-ray studies of the extremities, made clinically to demonstrate calcification of muscular arteries, should not receive much weight in connection with our problem, since such calcification is usually indicative of Monckeberg's sclerosis, a condition which in itself is of little clinical significance, nor it is necessarily related to the more important atherosclerosis.

Dr. Shields Warren[5] had carefully compiled and analyzed the largest series of data from postmortem examinations of diabetics, and here we are provided with comparable information from nondiabetics as well. In 484 diabetic autopsies, 143 (30 per cent) deaths were directly or immediately secondary to arteriosclerosis. But four cases with diabetes of longer than five years duration were free from arteriosclerosis. Of the 143 cases in which death was the result of arteriosclerosis, approximately 50 per cent were directly referable to the heart, roughly 20 per cent died from lesions of the extremities, principally gangrene, and slightly more than 10 per cent died as an effect of cerebral arteriosclerosis. Figures quoted by Wilder[2] from 197 necropsies on diabetics at the Mayo Clinic are comparable. In spite of the fact that 60 per cent of these individuals were less than 40 years of age, recent coronary occlusion accounted for 11 per cent of the total deaths, and occlusive coronary disease occurred in 48 per cent. Occlusion of arteries of the legs, sufficient to cause symptoms, occurred in 39 per cent of the cases. Such data leaves no question as to the much greater incidence of severe atherosclerosis in patients with diabetes mellitus.

It is stated that atherosclerosis of a degree which causes serious impairment of the blood flow occurs approximately eleven times more often in diabetics than in nondiabetics. Levine has said[6], "Among the distinct entities that are etiologically related to coronary thrombosis, diabetes is second in importance only to a previously existing hypertension."

We have considered briefly the effects of arteriosclerosis upon the heart, the extremities, and the brain; yet another effect of arteriosclerosis in diabetes deserves special mention. Roughly 50 per cent of diabetic patients, routinely examined, show an absence of patellar reflexes. In diabetics whose disease is of considerable duration, approximately 75 per cent have no knee jerks[7]. This latter group for the most part exhibit severe arteriosclerosis. Woltman and Wilder[8] have presented evidence to show that such neurologic changes are the result of obliterative arteriosclerosis of the nutrient vessels and they have demonstrated resultant patchy areas of degeneration, most marked in the distal part of the peripheral nerves. According to De Takats[7], these neurologic changes fall into four categories:

1. Trophic ulcers.
2. Diabetic tabes — even to and including the Charcot joint.
3. The irritable nerve lesion in diabetes — neurogenic spasm of vessels, dysesthesia, soreness, tingling, and burning.
4. Ischemic neuropathy of the posterior root ganglion.

Are there special characteristics of arteriosclerosis in diabetes mellitus? The major characteristic is, as I have previously stated, a *quantitative* one in that diabetics tend to have much more severe atherosclerosis, and at an earlier age than do nondiabetics. The atherosclerosis tends also to be *more extensive*, in that medium sized arteries of the extremities and those small arteries which nourish the dorsal roots and spinal nerves are affected. In the case of vessels of the extremities, medial calcification seems also to be of greater incidence so that the two changes are often found together. Dr. Shields Warren has stated that " . . . if there is one thing that should lead us to suspect that an artery in a given case comes from a diabetic

patient it is when we find the intimal type of involvement in the muscular arteries, either alone or superimposed upon the medial calcification."

The diabetic thus often manifests "unusual" effects from arteriosclerosis in that neurologic disorders, even to the extent of tabes or trophic ulcers, are seen and also there is a relatively high incidence of gangrene. Diabetic gangrene is almost always of the moist type in contrast to that which occurs in the senile arteriosclerotic. In the latter group, vascular occlusion usually comes about suddenly and there has been little stimulus previously for the development of collateral channels. In the case of the diabetic, however, the arteriosclerosis is gradually occlusive and there is considerable collateral circulation set up. Under these conditions, in the words of Dr. Warren, "any unusual stress will tip the balance. There will be insufficient blood supply to maintain life of the tissues under abnormal conditions, too much to permit mummification."

A word should be said about retinopathy in diabetes mellitus. In a group of 1021 patients having diabetes and examined at the Mayo Clinic[9], 30.6 per cent showed some type of retinopathy of which only 0.7 per cent were hypertensive and 0.3 per cent toxic. Dr. Wagener, in analyzing this data, concludes that diabetic retinopathy is distinct from that affected by arteriosclerosis although there are others who do not share this view. The lesion is characterized by an initial small punctate hemorrhage. Later there is an albumin-rich extravasation into the internuclear layer of the retina with but an occasional lipophage in evidence. In more advanced stages there may be phlebosclerosis and aneurysmal dilatation or varices.

Many theories have been expounded seeking to explain the pathogenesis of atherosclerosis and the historical development of these ideas is most interesting. There is inadequate time to properly consider even the modern views on this subject however. Clifford Allbut's comment on this subject is still timely, "Our path is cumbered with guesses, presumptions, and conjectures, the untimely and sterile fruitage of minds which cannot bear to wait for the facts, and are ready to forget that the use of hypotheses lies not in the display of ingenuity but in the labor of verification." Those hypotheses which merit consideration at the present are fairly represented, I believe, under the following eight categories. Almost any of these may be applicable to the occurrence of atherosclerosis in diabetes mellitus.

1. Hypercholesterinemia
2. Mechanical trauma leading to "imbibition"
3. Primary vascular changes within the vaso vasorum
4. Toxic damage
5. Anoxia
6. Colloidal plasmatic disturbances
7. Altered osmotic relationships between the plasma and vessels
8. Primary defects in metabolism of lipids

Principally as a result of the experimental observations and writings of Koltz and of Leary, much attention has been directed to the causative role of *hypercholesterinemia* in atherosclerosis and there seems little doubt but that herbivores, e.g., rabbits, which are fed cholesterol in amounts far in excess to that which would ever be consumed under natural conditions do develop plaques of lipid deposition within arteries. It is Leary's opinion[10] that reticulo-endothelial cells of the sinuses of the liver and suprarenal glands phagcytose cholesterol esters, become liberated from their original site, and, as a result of "positive chemotaxis," invade the subendothelial layer of aortic intima. He believes that if this lipid remains in the form of cholesterol ester, it acts as a low grade irritant and continues to bring about local degenerative and proliferative (fibrosis) changes. There is much more that one could say in support of a causal relationship between hypercholesterinemia and atherosclerosis. As evidence against this, however, must be cited the fact that many observers have found that advanced atherosclerosis occurs in cases in which average values for plasma cholesterol are not elevated, nor is there evidence of hyperlipemia in association with old age[2 11 12]. In human nephrotic states, where the level of the blood cholesterol is sometimes very high, several observers have found that the incidence of arteriosclerosis is no higher than in healthy individuals of the same age[12]. Of specific relation to arteriosclerosis in experimental hypercholesterinemia, the lesions have thus far been produced only in herbivora. Schoenheimer has suggested that this may be because herbivorous animals cannot excrete cholesterol. It has been shown that rabbits fed cholesterol in oil manifest a lipemia which persists for several hours in contrast to the slight transient lipemia developed by

carnivorous animals treated in a similar manner[13]. To quote Page[11], "The evidence is clearly against the view that the level of lipid in the blood except under special circumstances, is controlled by the dietary intake." Certainly, as Moschcowitz has stated, "Cholesterol arteriosclerosis is produced under physiological conditions that are not even approached in man." Furthermore, this experimental arteriosclerosis does not exactly simulate atherosclerosis in man[12]. The lesions are not limited to the arteries of the aortic system, but occur also in the pulmonary arteries, the veins, and the reticulo-endothelial system. Cerebral arteries are rarely if ever involved, as contrasted with their frequent involvement in man. In addition there are important variations in the morphologic character of these experimental lesions, but we need not discuss this further.

Virchow and Aschoff were the major early proponents of the theory that *mechanical trauma leads to imbibition* of cholesterol by arteries so affected. It was felt that hypercholesterinemia was an important factor here and Aschoff was of the opinion that increased concentrations of lipid *must* be present before atherosclerosis could occur. The fact that atherosclerosis tends to occur first, and is usually most pronounced at points of greatest mechanical stress within large arteries, has been given as evidence to support this theory. The greater occurrence and extent of atherosclerosis in hypertension lends additional support. Winternitz, Thomas, and LeCompte[14], from a series of very careful morphologic studies, have found that the vaso vasorum arise not only from the adventitia but open also directly into the lumen of the blood vessels. Particularly at those places which are the most common sites of atherosclerosis these vascular channels are elaborate and quite extensive. These observers consider that hemorrhage or thrombosis of these vessels may be "potent contributing factors" in atherosclerosis. In other words, the *primary vascular change may occur in the vaso vasorum.* Others are of the opinion that vascularization of the type described by Winternitz, with thrombosis and hemorrhage, is a sequel of atherosclerosis rather than its cause.

In regard to the *toxic theory* there have been a considerable number of endogenous and exogenous substances considered including the effects of infection, various heavy metals, etc. That there may be a causative factor in selected instances cannot be denied; however there is little evidence that they play a role in most instances.

Hueper has been most prolific in experimental observations and writings to support the *anoxic theory*[15]. It is his opinion that cholesterol, under certain physico-chemical conditions, may coat both the vascular wall and the erythrocytes in such a manner as to interfere with gaseous exchange and nutrition. The injury incident to this forms the stimulus for phagocytosis of lipid and subsequent degenerative and proliferative changes within the artery.

In a recent symposium, Dr. Hueper stated[16], "I think atheromatosis in man is not due to hypercholesterinemia but due rather to a disturbance in the stabilizer of the colloid state of cholesterol in the blood." In his opinion the vibratory impact of the blood probably affects deposition of lipid under the above conditions. Thus, the idea of mechanical trauma, introduced by Aschoff, is re-expressed but interpreted in quite a different manner.

Colloidal plasmatic disturbances were thought to be of primary importance by Hueper but have been considered in a different manner by Page[11] and others. Under normal conditions there is a state of balance between lipids and proteins and the lipid is, in a sense, bound in a lipo-protein complex. It may be that those states which favor the accumulation of "freed" lipid may favor deposition of lipid in the arteries. Such a concept would readily explain those discrepancies in data which concern the blood lipid level in atherosclerosis since, by our present methods of analysis, we do not differentiate between "free' and "bound" lipid. In this connection it should be stated that Simms and Stillman[17] have found that blood contains a substance (B factor) which when added to cultures of clear fibroblasts causes them to become granular — from ingestion of lipid.

Dr. Warren has stated in his book *The Pathology of Diabetes Mellitus*, "Lipids are not the first wave of the assault. They are the reinforcements that consolidate the gains made by the attacking force." He suggests that in diabetes, fluctuations in blood-sugar concentrations may produce swelling of the intimal ground substance through *changes in oncotic pressure* and that the "strain" so induced provides the necessary factor leading to imbibition according to Aschoff's theory. He believes that acidosis may produce a similar effect. Somewhat against this

theory is the fact that the severity of the diabetes does not necessarily parallel the severity of atherosclerosis, nor does adequacy of treatment protect from severe atherosclerosis.

Primary defects in metabolism of lipids have been speculated upon to considerable extent[11]. There are two aspects to consider here. The first relates to the *chemical nature of lipids* recovered from atheromatous lesions. Several very careful studies have been made in the past few years and although some alteration has been observed, as compared with plasma lipids, there is nothing to indicate that atherosclerosis is caused by a perverted metabolism in the sense that some foreign and toxic lipid substance is produced. The work of Dragstedt is most promising in this field, particularly in the case of arteriosclerosis in diabetes. Dragstedt and coworkers have published a number of reports which, I believe, leave no question as to the existence of a pancreatic hormone or enzyme which they have termed *lipocaic*. Time does not permit a review of the data which have led to the above conclusion[18], a conclusion which is now generally accepted. Suffice to say that in the absence of elaboration of lipocaic by the pancreas there results a grossly disordered lipid metabolism. Lipocaic seems to facilitate the conversion of fat into glucose — at least in diabetics. In this effect choline may be involved. There is also evidence that lipocaic influences the transport of fat and the regulation of the blood lipids. Lipocaic will prevent the fatty liver of starvation. According to Dragstedt[19], "The administration of extracts of the anterior pituitary hormone to fasting guinea pigs causes a migration of fat from the body depots to the liver and an excessive breakdown of this fat, producing ketonemia and ketonuria. This simultaneous administration of lipocaic prevents this accumulation of fat in the liver due to the ketogenic hormone. . . . "

The fact that concerns us most, however, is that Dragstedt observed atherosclerosis in 25 (15 per cent) of 160 dogs which were subjected to complete pancreatectomy and whose diabetes was carefully controlled with insulin. The major defect in these dogs was thus lipocaic deficiency. Of 400 dogs used for other purposes, and serving as a control group in this instance, only five exhibited atherosclerosis and this almost insignificant in degree. It seems to me that the importance of these observations can hardly be overestimated in that this is the first method by which atherosclerosis, comparable in most respects to that seen in man, can be consistently produced in other than a herbivorous animal. In relation to diabetes and atherosclerosis I shall quote a portion of Dr. Dragstedt's discussion in a recent symposium[19], "There are some diabetics who show a pure insulin deficiency and they are corrected by insulin therapy. There is no alteration in blood lipids and no alteration in cholesterol. On the other side you may find a patient, very mild diabetic, who requires little or no insulin. There are hypercholesterolemia and possibly a hepatomegaly. These are the kind of patients who may show a predominant insufficiency of 'lipocaic' and less interference with insulin secretion. Within those two extremes there may be considerable variation."

This evidence then introduces a rather optimistic note upon which we may close this discussion. It may well be that when we understand more about the properties of lipocaic and those conditions which act naturally to affect a deficiency state of this substance, we may be able to prevent the untimely and excessive occurrence of atherosclerosis in diabetics and perhaps apply effective prophylaxis against atherosclerosis in nondiabetics as well.

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SICKLE CELL ANEMIA: REPORT OF A CASE WITH MURAL THROMBI IN THE HEART

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In Oklahoma, with our large negro population, it is necessary that every physician seeing patients of the colored race bear in mind the possibility of a sickle cell anemia. Some of our Indians have an admixture of negro blood, and with these the possibility of sickle cell disease must be remembered. Simple sealing of a moist preparation with vaseline will, in a few hours, disclose the presence of the sickle cell trait and may lead to a correct diagnosis.

The symptomatology of the disease is varied. Abdominal crises, pains in any portion of the body including bones and joints, cardiac symptoms and findings such as enlargement and murmurs, infarctions of the lungs mimicking pneumonia, cerebral symptoms, and even hemorrhages, bone changes, and liver damage are some of the presenting symptoms reported.

Sickle cell anemia is one of several recognized types of inborn, hereditary, constitutional abnormalities of the erythrocytes. Other similar conditions are constitutional hemolytic jaundice (Minkowski-Chauffard), ovalocytosis (Dresbach), and Mediterranean erythroblastic anemia (Cooley's disease).

Concerning the sickling phenomenon, experimental work has shown that sickling is dependent solely on the erythrocytes, and not on the plasma. It is greatly enhanced by the lack of oxygen, and an increased supply of carbon dioxide in the blood. The phenomenon of sickling may be reversed by increasing the oxygen tension.

Both sicklemia and sickle cell anemia are due to an inborn constitutional abnormality of the formation of erythrocytes. It is transmitted to the offspring as a Mendelian dominant. Bauer and others consider the trait as a degenerative stigma. Patients with sicklemia often have other constitutional abnormalities, such as oxycephaly (Harden[19]) and flexion deformity of the little finger (Haden and Evans[20]).

About eight per cent of all negroes inherit this sickling trait. Of this number possibly less than 10 per cent develop severe anemias. Bauer[2], however, considers that all persons possessing the sickle cell trait are potentially able to develop any or all of the characteristic symptoms of sickle cell anemia, even though anemia may not be present at a given time. The case reported here may fall into this category.

REPORT OF A CASE

R. C., a 28-year-old colored male, a "bell hop" at a local hotel, entered the Veterans Administration Hospital at Oklahoma City with complaints of weakness, diarrhea, and vomiting. About December 1, 1946, he had a "cold" followed by a nonbloody diarrhea of four to 10 stools daily. On December 10, 1946, he experienced vomiting after eating. During the week preceding admission he noticed a tumor in the right, anterior, inferior cervical area which was more noticeable on lifting heavy bags, and at the same time shortness of breath was noted, becoming more pronounced until admission. He gave a history of having pneumonia in October, 1946, with recovery in two weeks. He had syphilis in 1936 and again in 1940, with apparently adequate treatment. He entered the Army in 1943 and was discharged after three months, for obscure reasons.

On examination the patient was a well-developed, fairly well-nourished negro male who appeared weak but not acutely ill. The pulse rate was 88 per minute, the temperature 98.8° F., and the respiratory rate 18 per minute. A mass, nontender, was seen on the right side of the neck, fluctuating with the heart beat. The blood pressure was 104/70. The heart appeared grossly enlarged to the left. The inferior margin of the liver was

palpated below the umbilicus, and the spleen was palpable.

On January 6, 1947, there were 3.38 million erythrocytes per cu. mm. with 11.5 Gms. of hemoglobin per 100 cc. The leucocyte count was 10,000, with 78 per cent neutrophils. No sickled cells were seen on the direct stained smear. On making a wet mount, five per cent of the erythrocytes were sickled after four hours and 12 per cent after 26 hours. The icteric index was 20.

Following a transfusion, the erythrocyte count rose to 3.6 million per cu. mm. with 12.5 Gm. of hemoglobin per 100 cc. The leucocyte count was 6,000 per cu. mm., with 70 per cent polymorphonuclear granulocytes. The Kahn test was doubtful, and the urinalysis was noncontributory.

On January 7, 1947, a radiograph of the chest was reported. It showed a marked increase of the transverse diameter of the heart, and some stasis in the pulmonary circulation. Under fluoroscopy no aneurysm was seen in the right side of the neck.

During the first few days in the hospital he complained only of weakness. The pulse rate varied from 70 to 110 per minute. On January 8, 1947, he fell while returning from the bathroom and was unconscious for about five minutes. He was given sedatives and 500 cc. of citrated blood. His condition deteriorated rapidly, he developed a cough which in a few hours was accompanied by hemoptysis, and he died at 8:20 p.m. on January 29, 1947.

At necropsy, the sclerae had a very slight icteric tint. Bloody fluid oozed from the nose, and the mouth contained blood. There was no edema of the extremities. On opening the abdominal cavity, about 600 cc. of yellow-red fluid was found. The liver was three cm. below the costal margin in the right midclavicular line. There was no free fluid in either pleural cavity. On opening the pericardial cavity, about 30 cc. of blood tinged fluid was found. The pericardial surfaces were dull red, rough, and new-formed adhesions between the pericardial layers were found near the apex. The heart measured 15 cm. from base to apex and 14.5 cm. across the base, and weighed 650 Gms. On section 5 cm. from the apex, the myocardium was flabby and brown with light-colored areas. An organized, laminated thrombus two cm. in thickness was seen partially filling the left ventricle. A layered, mural thrombus two cm. in thickness was also found in the left atrium, the lower border of which appeared broken off. The coronary ostia were patent and in their usual locations. The heart, without clots, weighed 540 Gms.

An organized embolus was found at the bifurcation of the lower branch of the pulmonary artery, occluding all the artery supplying the left lower lobe and partially occluding the artery to the right lower lobe. This embolus could be matched to the broken edge of the mural thrombus in the right atrium. A smaller embolus, 2 x 1 cm., was found in a branch of the pulmonary artery, occluding much of the blood supply to the right lower lobe.

The spleen was 8 x 7 x 5 cm. and weighed 90 Gms. A small infarcted area was seen on the cut surface. The liver weighed 1530 Gms. and the cut surfaces were red brown. Blood was found in the upper gastrointestinal tract, which was apparently swallowed. No areas of infarction were seen in the upper or lower portions of the gastrointestinal tract.

The thyroid gland was nodular and asymmetrical, extending into the right lower neck. The mass was an encapsulated one, apparently a fetal adenoma. No abnormalities of the vessels of the neck were seen.

On microscopic examination of preparations from the heart, the myocardial fibers varied in width. Their striations were not perceptible in many areas. Their nuclei varied markedly in size and staining; many were bizarre in shape. In a preparation from the left ventricle, extensive areas of fibrous tissue were seen replacing muscle fibers. In these areas the fibroblasts were loosely arranged, and many blood vessels consisted only of a single layer of endothelium. These areas contained a fair number of lymphocytes, plasma cells, and large mononuclear cells in focal areas. Arterioles exhibited marked medial thickening and vacuolization with some hyalinization and necrosis of the media, and some intimal thickening was seen. No marked changes were seen in larger branches of the coronary arteries. The endocardium was thick and blue stained. Similar changes were seen in other preparations. In one, fibroblasts were seen invading a layered clot.

In a preparation taken near the edge of the infarcted area in the right lung, many of the alveoli were slit-like, and sickled red blood cells were seen in alveolar spaces and in the lumens of bronchioles. Arterioles exhibited changes similar to those seen in the heart preparations. Other preparations from the left lower lobe exhibited the usual changes of infarction.

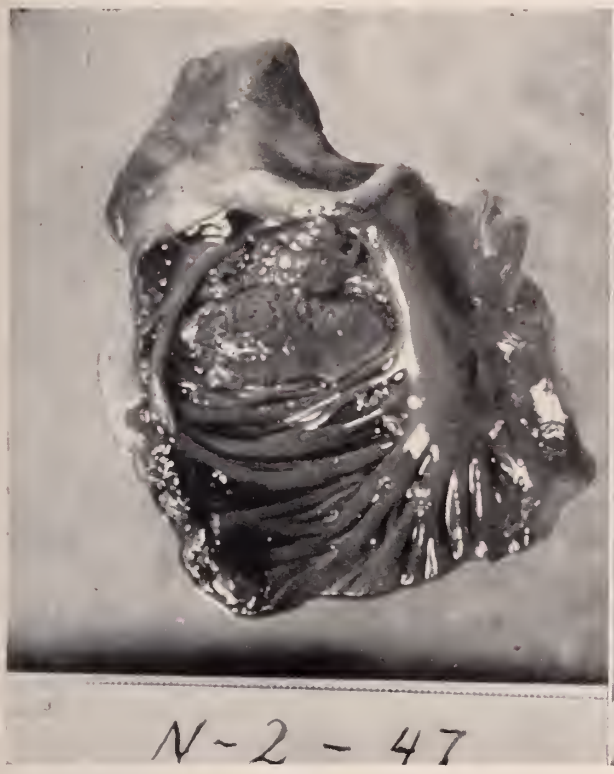


FIGURE 1
Thrombus in right auricle.

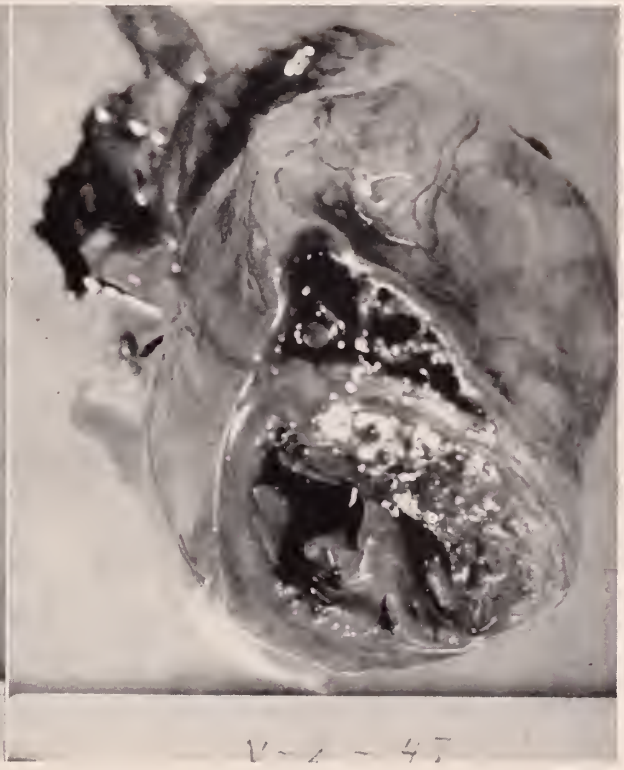


FIGURE 2
Thrombus in left ventricle.



FIGURE 3
Area of fibrosis in left ventricle, with medial changes in arteriole. X 120.

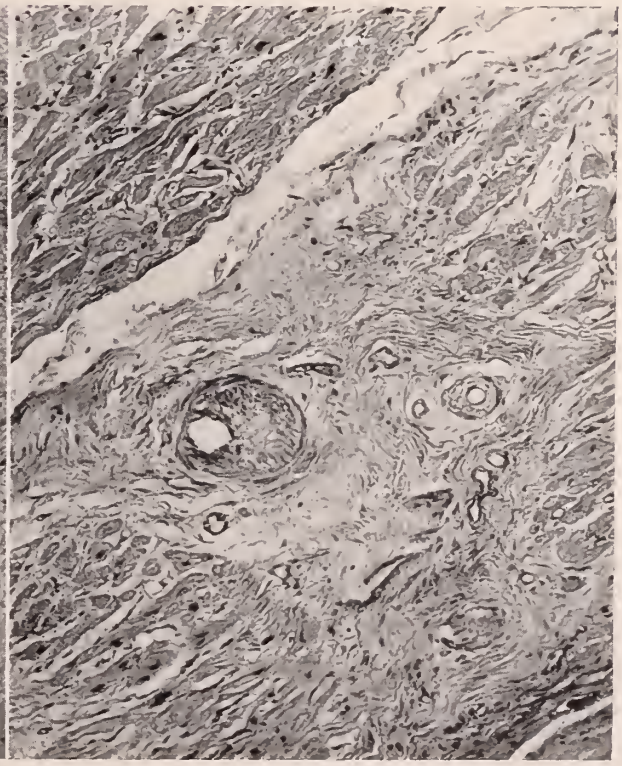


FIGURE 4
Fibrosis and arteriolar changes in heart muscle. X 120.

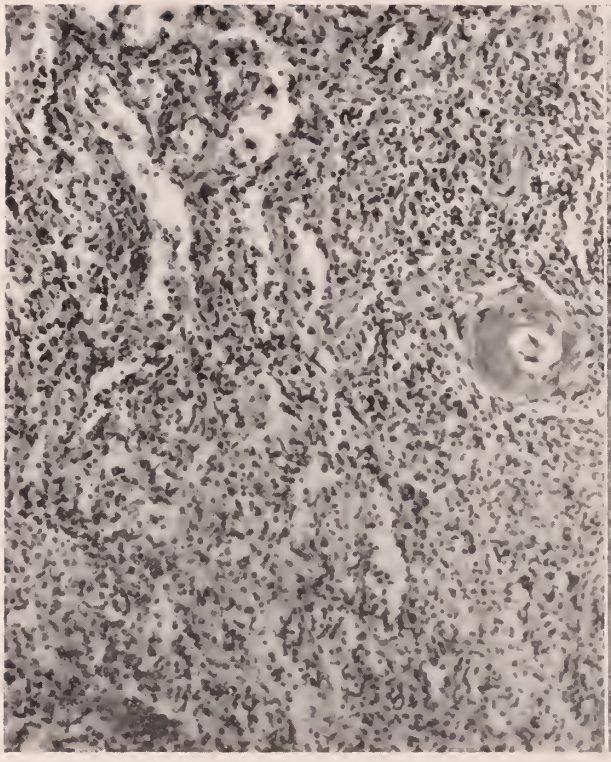


FIGURE 5
Spleen, showing "pooling" at edge of Malpighian corpuscles, arterial change with sickled cell in lumen, and deposit of hemosiderin in tissues. X 180.



FIGURE 6
Liver, exhibiting central necrosis and cellular infiltration. X 120.

On study of preparations from the spleen, the Malpighian corpuscles were close together and varied in size; many were small. The arterioles of many exhibited medial changes such as were seen in the heart and lungs. About the edges of many of the Melpighian corpuscles "pooling" was seen[3 13]. Sinuses were dilated and contained sickled cells. Hemosiderin granules were seen free, in macrophages, and in deposits in recticulum cells. In other areas the pulp appeared compressed and some fibrosis was observed.

The lobular arrangement of the liver cell cords was intact. For a short distance about the portal areas the nuclei of the liver cells stained well and their cytoplasm was finely and coarsely vaculated. Nearer the center of the lobules, the cell cords were seen only as shrunken outlines with no nuclei. In the wide sinusoids were many lymphocytes, large mononuclear cells, some plasma cells, and many brown granules. Similar granules were often seen in areas in the necrotic cell cords. Kupfler cells were often dilated and contained similar granules. Little change was seen in the portal areas. The epithelium lining the bile ducts stained well.

Deposits of hemosiderin were also observed in the cells of the zona reticularis of the adrenal cortex.

On study of preparations from the kidneys, some of the glomeruli contained hyaline masses, apparently from old emboli. Arterioles exhibited medical changes such as were seen in the heart, lungs, and spleen. Focal infiltrations of lymphocytes, plasma cells, and large mononuclear cells were seen here and there.

Fetal adenomata were found in the thyroid.

COMMENT

In cases of sickle cell anemia, moderate or more pronounced cardiac enlargement has been reported, clinically and at autopsy[5 9 4]. Along with this the clinical and electrocardiographic evidence of coronary occlusion has been reported by Murphy and Shapiro[7] and also Zimmermann and Barnett[6]. Fibrinous pericarditis was reported by Mallory[10] with round cell infiltration in the myocardium. Yater and Mollari[15] reported a "soldier's patch" on the anterior surface of the right ventricle in their case of sickle cell anemia. Diggs and Ching[3], Klinefelter[4], and Bauer[1] have reported myocardial scarring in cases of sickle cell anemia. Steinberg[16] reported mononuclear infiltration and a patchy muscle necrosis in the heart at necropsy.

Arteriolar changes similar to those seen in this case have been reported in many organs. Yater and Hansmann[5] reported them in the lungs; Bridgers[12], in the brain; and Diggs and Ching[3], in the spleen. It is difficult to decide whether the arteriolar changes may be on a basis of constitutional biologic inferiority as Bauer suggests, or due to previous thrombus formation. Stevenson[17] suggests that "sickled cells are much more rigid and less adaptable to change in vascular shape and caliber. As a result they are apt to be caught in narrow capillaries and 'jams' [occur]." There is a tendency for this obstruction to spread back to the arterioles and smaller arteries, with resultant thrombosis and infarction. This tendency is promoted by the release of coagulating substances into the blood stream during the course of destruction of red cells which are jammed. The resultant increase in blood coagulability may be responsible for the sudden initiation of a crisis with widespread thrombosis. Wintrobe[18] also suggests that arteriolar changes in the smaller branches may be due to prolonged stasis.

Infarcted areas in the lungs have been described by Yater and Hansmann[5], Graham[9], Mallory[10], and Steinberg[16]. The massive infarction in this case, however, was a result of an embolus from the mural thrombus in the right auricle. The smaller infarcts, however, may have been on a basis similar to those already reported.

The changes observed in the spleen are of the type described by Diggs and Ching[3], Rich[13], and others.

The liver damage found was at first thought to be an acute infectious hepatitis. However, on study of the literature, Ryerson and Terplan[11] reported a somewhat similar finding in their case. Graham[9] reported a patchy necrosis of the liver cells in his case of sickle cell anemia. Lowe and Adams[8] reported hepatomegaly and evidence of liver damage occurring in crises of sickle cell anemia.

It is probable that the exacerbation of sickle cell anemia causing the effects observed here was at its peak when the patient first noted weakness, and that at the time of admission he would have been in remission had not the cardiac damage been so severe.

SUMMARY

1. A case of sicklemia and sickle cell anemia is reported, with marked myocardial scarring, fibrous pericarditis with adhesions over the apex, and mural thrombi in the right auricle and left ventricle, with massive infarction of the left lower lobe and infarcts in the right lung base, arteriolar changes in heart, lung, spleen, and kidneys, hepatitis (or "hepatosis"), and splenic changes.

2. While a fairly careful search of the available literature has not offered other instances of mural thrombi in the heart, these apparently were secondary to myocardial and endocardial changes following arteriolar infarctions in the heart such as have been described in other organs by many authors. The liver damage also can be explained by the effects of sickle cell anemia.

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Do you regularly receive the Journal and the News Letter-gram which are issued monthly from the State Association offices? The News Letter-gram, an innovation designed to keep members of the Association informed on legislative and other matters of interest to the profession and to supplement the coverage of the Journal, is mailed on or around the twenty-fifth of each month. If at any time members of the Association fail to receive copies of both of these publications, they should notify the Executive Office immediately giving the full and correct mailing address.

CLINICAL PATHOLOGIC CONFERENCE

University of Oklahoma School of Medicine

Presented by the Departments of Pathology and Pediatrics

BELA HALPERT, M.D. AND CHARLES M. BIELSTEIN, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HALPERT: The case that we are presenting today exemplifies certain inadequacies in our methods of physical examination and laboratory technique. In this instance, several important lesions were not demonstrable clinically. With this obvious handicap, Dr. Bielstein has kindly agreed to present and analyze the clinical data. He never saw this patient and his information regarding the case is exactly that which has been presented to you in mimeographed form.

PROTOCOL

Patient: J. S., white male, age 28 days; admitted November 2, 1946; died November 4, 1946.

Present Illness: The patient was brought to the hospital because of jaundice and swelling of the abdomen. According to the mother this child was delivered normally after an uneventful nine months pregnancy. Since birth the child had been jaundiced and had had 10 to 12 soft clay-colored stools daily. For ten days prior to admission there had been occasional regurgitation of some formula, but no projectile vomiting. Two days prior to admission marked abdominal distention developed. No blood was noted in the stool or in the vomitus prior to admission.

Family History: The family history was essentially negative. There was one other child in the family, 14 months old.

Physical Examination: On admission the child appeared to be acutely ill. The skin had a yellow tinge. The head was well shaped. The anterior and posterior fontanels were open. There was no rigidity of the neck. The sclerae were yellow. Pupils reacted to light. The tongue was slightly coated. Mucous membranes of the mouth and throat were normal in appearance. The neck and chest were symmetrical. No murmurs or thrills were detectable over the precordium. The abdomen was markedly distended and the superficial veins were distended. There was shifting dullness, but no fluid wave was elicited. No abnormal masses were felt. The liver edge was palpated one and one-half fingers below the right costal margin. Active peristaltic sounds were detected over the abdomen. There was slight edema of the scrotum and excoriation of the skin over the buttocks.

Laboratory Data: On November 2, 1946, there was 13 Gm. per cent hemoglobin with 4,000,000 RBS's/cu.mm. The white blood cell count was 20,500 with 50 per cent neutrophils, 1 per cent basophils, 39 per cent lymphocytes, and 2 per cent monocytes. On November 4, 1946, the icteric index was 70. The Mazzini test of the blood was negative.

Clinical Course: On examination, rectal temperature was 98.4° F. and remained subnormal during the entire hospital course. An enema was given with considerable return of clay-colored stool and gas. Five per cent glucose and saline, with sterile water, was given every four hours and the child was given vitamin K by intramuscular injections. On November 3, 1946, he was seen by a surgical consultant who felt that the condition was not a surgical problem. The impression was "ascites of unknown origin — suggest abdominal paracentesis and observation." Approximately 12 hours after admission the child began to pass sticky, tarry stools rather frequently. On November 4, 1946, the patient received 35 cc. of whole blood in the bone marrow of the left tibia. His condition became progressively worse, supportive and stimulative therapy were of no avail, and he died on November 4, 1946, at 5:55 a.m.

CLINICAL DIAGNOSIS

DR. BIELSTEIN: With all due respect to Dr.

Halpert, I believe that this case may be correctly diagnosed on the basis of the history alone. We shall soon see why I am overly optimistic. To begin with then, the history states that jaundice was present at the time of birth. If this is correct, this is of great significance. Many questions present themselves; did the icterus progress gradually or rapidly? Has there been any remission or lessening of intensity? Were there meconium stools preceding the clay-colored ones? Was there anything in the vomitus other than the formula? Since "regurgitation" did not occur for the first 16 days of life, nor was there gradual abdominal distention during this time, it would appear that this child did not have intestinal obstruction at birth. Supporting this idea is the information that, rather suddenly, two days before admission there developed marked abdominal distention indicating that the process had suddenly changed in some manner. Physical examination of the patient suggested that this abdominal enlargement was not simply from gaseous distention. Was there gaseous distention in the intestines? Perforation, with gas free in the peritoneal cavity, is very unlikely because the patient did not manifest marked toxicity. There was no blood in the vomitus or in the stools early in this patient's course so far as we can tell. Upon physical examination we are presented with a jaundiced acutely ill male infant who had abdominal distention, probably ascites. There was shifting dullness, but no fluid wave. There was scrotal edema. The blood count was not remarkable for a child who had been ill this long. During the hospital course, there occurred a rather sudden and serious turn of events. Apparently the child was not in too much distress until after an enema. Following this, the stools changed in character from clay color to sticky tarry ones. Because of this black color and "sticky" consistency, the hemorrhage responsible for this must have occurred in the upper intestinal tract; no fresh blood was evident.

Now to elaborate a differential diagnosis: When a child is born with jaundice the first possibility that comes to mind is *erythroblastosis fetalis*. Jaundice, in this condition, is retention jaundice. The stools usually contain bile. In some cases, for two to three days following meconium stools, there are clay-colored stools. This child had clay-colored stools for 28 days. We know nothing of the Rh factor here. Knowledge of this would be of great help. A child with erythroblastosis, born with jaundice, seldom survives without treatment. If jaundice appears and the infant survives, it is not likely to last for 28 days. Another condition to consider is *histoplasmosis*. The lack of central nervous system involvement pretty well rules this out. One must think also of *septicemia*. The course of the disease was afebrile and the child did not have marked anemia. This rules out septicemia. A *congenital anomaly of the liver or hepatic ducts* causing complete obstruction to the outflow of bile must be considered. If the jaundice were not present at birth, and I doubt that it was, it would have appeared soon afterward. The course of the disease would have been fulminating and would not have lasted 28 days. The next disease we must consider is *fibrocystic disease of the pancreas*. Usually, in the more severe forms of this condition, it is heralded by meconium ileus, i.e., inspiration of and obstruction by meconium. I would like to know about the early bowel movements of this child. This disease can produce jaundice and clay-colored stools; the stools are usually greasy and foul-smelling, however. Consideration must also be given to congenital *syphilis*. With a negative Mazzini I believe that this can be ruled out. Now, suppose that there was an *abdominal mass*, extrahepatic, which was gradually increasing in size — what would be the picture? Suppose it involved the duodenum. This mass would gradually and progressively interfere with the passage of bile through the common bile duct. There would be a gradual and early onset of jaundice which would become more severe as the mass increased in size. Once the mass has reached sufficient size there would also result ascites with abdominal distention. Distention of the veins of the anterior abdominal wall was observed clinically. This is additional support for the diagnosis of portal hypertension. Such an extrahepatic mass as we have postulated could cause this picture very easily. We have two things to consider as terminal events: (1) that there were *varices* in the lower end of the esophagus which ruptured. With esophageal or gastric hemorrhage there usually occurs vomiting of blood. There is no history of that in this case. A second consideration is that of an ulcerative lesion in the upper small intestine. Such ulcers, in cases of this sort, may be secondary to some cardiovascular lesion, or neurocirculatory involvement — some lesion which will in itself produce death. This seems to be the most likely explanation of the events recorded in this case. My diagnosis would be *extrahepatic abdomi-*

nal mass, expanding variety, with an ulcer of the upper small intestine.

ANATOMIC DIAGNOSIS

DR. HALPERT: That was a most excellent bit of deductive reasoning. At necropsy, the child seemed well nourished and well developed; it measured 43 cm. and weighed 4300 Gm. There was an icteric tinge. The peritoneal cavity contained about 300 cc. of dark straw-colored fluid. The liver extended to the costal margin; it was decreased in size, presented a slightly granular appearance and was discolored a rather dark green. On the cut surfaces the liver lobules were smaller than usual and the portal spaces were relatively close to one another. The gallbladder was distended. The bile ducts were not distended or conspicuous. The mucosa of the esophagus and stomach were intact. About one cm. past the pyloric end of the stomach, in the duodenum, there was a rather deep area of ulceration 2 x 0.7 cm. Its margins were sharp. Its base was relatively smooth and composed in part of pancreatic tissue, i.e., it had extended through the entire thickness of the duodenum without however opening into the peritoneal cavity. This was the obvious source of bleeding. The remainder of the intestinal tract was not remarkable save for the tarry character of fecal contents. The spleen was approximately three times normal size (30 Gm.) and quite firm. Both lungs were slightly firmer in the posterior portions; one weighed 45 Gm. and the other 36 Gm., approximately 1½ times normal weight. On the basis of this, our *provisional gross anatomic diagnosis* was: (1) cirrhosis of liver, biliary, with jaundice, (2) splenomegaly and ascites and (3) ulcer of duodenum, acute, with melena. Microscopic studies yielded additional information. Sections from the lungs disclosed that the air spaces contained large mononuclear cells with foamy cytoplasm and small clear vacuoles. This is characteristic of *lipoid pneumonia.* This is readily explained when one considers the episodes of regurgitation of formulae. Actually this was of relatively little clinical significance. The liver presented extensive damage to hepatic cells. Hepatic cells were grouped in clusters rather than in cords and some were fused to form giant cells with as many as 20 nuclei. Between the cells there were distended bile canaliculi filled with inspissated bile. With all this there was a diffuse proliferation of connective tissue, further adding to the architectural confusion. A section from the duodenal ulcer



FIGURE 1

Observe the deep penetrating duodenal ulcer, also the finely granular appearance of the liver, a manifestation of biliary cirrhosis.

revealed the sharp circumscription described grossly and there was relatively little cellular infiltration and but little proliferation of fibrous connective tissue. In the pancreas, islets were increased in numbers and size; some were 5 or 10 times larger than normal. At the tip of the pancreas (tail) there was an area the size of a pancreatic lobule which was composed entirely of islet cells, an islet cell tumor—nesidioblastoma. We do not have information as to whether or not the mother had diabetes. Babies of such mothers sometimes have more islet tissue than normal. The amount of islet tissue here was in excess although this does not necessarily mean that there was an increase in production of insulin.

DISCUSSION

QUESTION: Was there any change in the other cells of the pancreas?

DR. HALPERT: No.

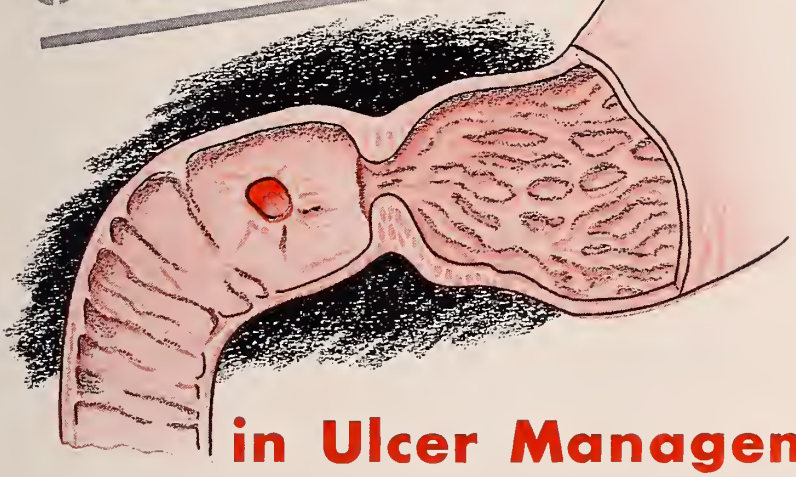
QUESTION: How do you explain the ulcer in the duodenum?

DR. HALPERT: It would appear that this might be related to the lack of bile and possibly an alteration in pancreatic secretion. Both bile and pancreatic juice play an important role in neutralizing the acid gastric juice which enters the duodenum.

DR. BIELSTEIN: I believe there was obstruction to the outflow of bile in this case.

DR. HALPERT: That is correct; this obstruction however was primarily intrahepatic.

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—Portis, S. A.: Diseases of the Digestive System, ed. 2, Philadelphia, Lea & Febiger, 1944, p. 199.

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SEARLE *RESEARCH IN THE SERVICE OF MEDICINE*

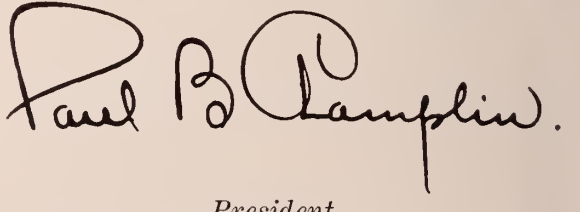
President's Page

The members of the Oklahoma State Medical Association should feel fortunate in having had a man of L. C. Kuyrkendall's qualifications as its President during the past year. Under his able leadership much progress has been made.

The educational campaign in the public press has been carried out under Dr. Kuyrkendall's direction and close contact has been maintained with the Legislature and the Governor. As a result, three important bills have been sponsored by your Association, and they have become law. These measures are for the protection of the public. First, House Bill 159, whose purpose is to make it mandatory that anyone practicing the healing arts place after his name identifying initials or words identifying his profession. The Doctors of Medicine in the State should be proud to comply with this requirement to safeguard the public. Second, House Bill 226, which makes it unlawful for any person to advertise a price for any health service requiring a prior diagnosis. This safeguards the public from being victimized by unethical firms advertising cheap glasses, dental plates, or other like services. Third, House Bill 278, which requires that no person in the healing arts shall use the title of "Doctor" unless he is holder of an unrevoked license from one of the healing arts examining boards. This safeguards the public against many unethical individuals, who style themselves as doctors in unrecognized arts.

There are several other bills which were supported by your Association, but which were not directly sponsored, such as the Mental Health Bill. Unfortunately, the Postmortem Commission Bill failed to pass for two reasons. First, because of the large appropriation necessary to carry it out, and second, because it did not receive the support from other organizations which should have been interested in its passage. This bill will undoubtedly come up again at the next meeting of the Legislature. The University of Oklahoma School of Medicine and University Hospital were supported in their attempt to obtain a greater appropriation for building and maintenance.

Oklahoma medicine is on the move. Dr. Kuyrkendall during the past year has contributed unsparingly of his time and ability, and I feel that we have been exceedingly fortunate in having such a man as our President during the past year.



President.



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ASSOCIATION ACTIVITIES

RATIO OF STATE PHYSICIANS TO POPULATION

The Association has just completed a survey of the ratio of physicians available in the State in proportion to population, the first calculated since the return of a number of physicians from the Armed Services. It is interesting to note that there are 16 counties in Oklahoma where each physician serves from one to 1,000 people; there are 30 counties, the largest group of all, where the ratio is one physician to 1,000-1,500 population; 26 counties which have one physician to 1,500-3,000 people and four counties (Cimarron, Coal, Pushmataha, and Roger Mills) where one physician must serve 3,000 or more people. The full list follows:

County	*Ratio Physicians To Pop.*	*County*	*Ratio Physicians To Pop.*
Adair	1:2266	LeFlore	1:1348
Alfalfa	954	Lincoln	1377
Atoka	2700	Logan	983
Beaver	2320	Love	1997
Beckham	782	Major	1323
Blaine	1019	Marshall	1401
Bryan	1334	Mayes	2131
Caddo	1412	McClain	2503
Canadian	1070	McCurtain	1998
Carter	758	McIntosh	1788
Cherokee	1525	Murray	1108
Choctaw	2207	Muskogee	1164
Cimarron	4000	Noble	1227
Cleveland	1261	Nowata	1993
Coal	4190	Oklahoma	530
Comanche	1686	Osage	1258
Cotton	1271	Ottawa	826
Craig	1560	Okfuskee	1158
Creek	1500	Okmulgee	1059
Custer	1022	Pawnee	880
Delaware	2468	Payne	947
Dewey	2075	Pittsburg	1190
Ellis	722	Pontotoc	837
Garfield	902	Pottawatomie	1380
Garvin	1210	Pushmataha	3042
Grady	956	Roger Mills	3245
Grant	1376	Rogers	1345
Greer	1265	Seminole	1690
Harmon	1950	Sequoyah	2428
Harper	1720	Stephens	1325
Haskell	2468	Texas	1182
Hughes	1166	Tillman	2248
Jackson	1280	Tulsa	791
Jefferson	1481	Wagoner	2420
Johnston	1080	Washington	866
Kay	1002	Washita	1581
Kingfisher	908	Woods	1839
Kiowa	1297	Woodward	848
Latimer	1670		

ANESTHESIA ADDED TO BENEFITS OF MEDICAL PLAN

Anesthesia was added to the benefits of Oklahoma Physicians Service, the voluntary plan for prepayment of surgical and obstetrical fees sponsored by the State Medical Association, at the annual board of trustees meeting in Tulsa, Monday, April 28.

Glen Leslie, Shawnee banker and chairman of the board, announced that the new contract will allow $10 anesthesia in major surgery and $5 for minor surgery. He added that rapid growth and efficient operation of the plan have made possible the new benefits.

The Physicians Service Board met jointly with the trustees of the Oklahoma Blue Cross plan for prepaid hospital care. Both programs are administered by N. D. Helland, executive director.

Reporting to the trustees, Helland said that both organizations have made splendid progress during the past year. He emphasized that it was a year of adjustment spent in organizing the internal control and building a sales force to cover the entire state. Helland's figures disclosed the growth of Blue Cross from 122,000 subscribers in April, 1946, to 190,000 at present, and of the Physicians Service from 7,000 enrolled a year ago to 28,000 now.

Trustees re-elected to the Blue Cross board were C. H. Sweet, treasurer; Dr. H. D. Murdock and T. Austin Gavin, all of Tulsa; Mont F. Highley, Jr., secretary; Virgil Browne and Dr. Henry Turner, Oklahoma City; and Dr. H. C. Weber of Bartlesville.

Appointments to the Physicians Service Board of John I. Taylor, Mountain View, and James C. Leake, Muskogee, were confirmed. Dr. Ralph McGill, Tulsa, was named to fill the vacancy created in the board by the resignation of Dr. A. W. Pigford, also of Tulsa. Trustees re-elected were Dr. W. W. Cotton, Atoka; Dr. J. B. Eskridge, Oklahoma City; Thomas Keltch, Alva; and Dr. T. H. McCarley, McAlester.

THIRD POSTGRADUATE CIRCUIT OPENS JULY 14

The Postgraduate Committee, Dr. Gregory E. Stanbro, Chairman, has announced that the third circuit in Gynecology with Dr. J. R. Bromwell Branch, instructor, will open in southeastern Oklahoma during the week of July 14. It is contemplated that the following will be teaching centers in the third circuit: Ada, Sulphur, Durant, Hugo, and Idabel, covering Pontotoc, Murray, Bryan, Choctaw, McCurtain, Johnston, Coal, Atoka, Pushmataha, and Marshall Counties. The exact date and place of the first and succeeding lectures in this series will be announced later, and enrollment cards will be mailed direct to all physicians in this area in the near future. The course will be conducted in the usual manner, with one lecture each week for a period of ten weeks. Certificates and manuals will be presented at the completion of the lectures.

The first circuit was completed April 11 in northeastern Oklahoma, and reports have come flooding into the office of the Committee that this is one of the most outstanding programs ever offered to the physicians of the state. Although physicians in this area were overworked by reason of the many cases of flu and respiratory infections which occur during this season of the year, the average percentage of attendance for the entire circuit was 82. The following resolution was received by the Journal following the completion of this circuit:

Resolution Adopted by the Rogers County Medical Society

"Be it hereby resolved, the Rogers County Medical Society desires to thank the Oklahoma State Medical



Brighter horizons for the petit mal patient

One important fact stands out in the rapidly expanding clinical record of Tridione: Thousands of children formerly handicapped in school and play by petit mal, myoclonic or akinetic seizures are finding substantial relief through treatment with Tridione. In one test, Tridione was given to 150 patients who had not received material benefit from other drugs.[11] With Tridione, 33% became seizure free; 30% had a reduction of more than three-fourths of their seizures; 21% were moderately improved; 13% were unchanged, and only 3% became worse. In some cases, the seizures, once stopped, did not return when medication was discontinued. Tridione also has been shown to be beneficial in the control of certain psychomotor epileptic seizures when used in conjunction with other antiepileptic drugs.[12] Wish more information? Just drop a line to ABBOTT LABORATORIES, North Chicago, Ill.

Tridione
REG. U. S. PAT. OFF.

(Trimethadione, Abbott)

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Association, Postgraduate Division, for the lectures in Gynecology presented by Dr. J. R. Bromwell Braneh.

"These lectures were very interesting and instructive, due entirely to the proficieney of the instructor.

"We wish to express our appreciation to Dr. Braneh for giving freely of his time and knowledge in the diseussion of our problems concerning individual patients.

"We feel that he is undoubtedly the finest Postgraduate Instructor that this society has had the pleasure of hearing."

(Signed) P. S. Anderson, M.D.
Secretary

Dr. Branch started his second circuit in eastern Oklahoma on April 14, and in spite of the rains and blocked highways made every lecture on time and was received with great enthusiasm. The doctors in most of the centers turned out 100 per cent for these lectures. This second circuit will close June 27. Physicians in the surrounding eireuits who wish to hear Dr. Braneh before he arrives in their area are invited to attend one or more lectures in either of the following centers: Poteau, LeFlore County Health Department, 7:30 P.M. Mondays; McAlester, Albert Pike Hospital, 7:30 P.M. Tuesdays; Okmulgee, Okmulgee City Hospital, 7:30 P.M. Wednesdays; Muskogee, Muskogee General Hospital, 7:30 P.M. Thursdays; and Tahlequah, Hastings Indian Hospital, 7:30 P.M. Fridays.

NEW MEMBERS

The following physicians have recently become associated with their county societies and the State Medical Assoeiation:

R. D. Anspaugh, Oklahoma City
J. A. Bates, Oklahoma City
J. F. Capps, Oklahoma City
*Walter H. Dersch, Jr.
John R. Hubbard, Oklahoma City
Ralph W. Hubbard, Oklahoma City
Wm. E. Hubbard, Oklahoma City
Paul D. Macrory, Bethany
Richard G. Stoll, Chickasha
Charles Stephen Stotts, Fairfax
Fred W. Taylor, Oklahoma City
*Armed forces.

OKLAHOMA PHYSICIANS PRESENT ART WORKS

Four Oklahoma physician-artists have reproductions of their works included in the third edition of *Parergon* (Evansville, Indiana: Mead Johnson & Company, Publishers, 1947. Price $5). This publication is devoted to encouraging medical men to participate in the visual arts and includes over 1,000 examples of original art works by physicians. The Oklahoma physicians represented are: Richard R. Casady, M.D., Oklahoma City, with a sculpture "Nude," page 29; Gerald Rogers, M.D., Oklahoma City, a photograph "David," page 43; W. S. Keifer, M.D., Purcell, a photograph, "Hide and Seek," page 72; and Gregory Roy Waters, M.D., Hugo, "Machinist's Tool Kit," metal work, page 141. The quality of art presented in this publication is outstanding and it is encouraging to lovers of art that the Oklahoma medical profession is so well represented. Physicians who are interested should join the American Physicians Art Association by applying to the Secretary, Francis H. Redewill, M.D., Flood Bldg., San Francisco, California, and sending membership fee of $2.00. Members receive a copy of *Parergon* free of charge.

AWARDS OFFERED FOR OB AND GYN STUDIES

The Central Association of Obstetricians and Gynecologists, which includes physicians from Oklahoma, is offering two $100.00 annual prize awards to any accredited physician, research worker, or medical student within the confines of the Association. One award is for the best investigative work and the other for the best clinical work in the field of Obstetrics and/or Gynecology. Papers submitted for either of these awards must be in the hands of the Secretary, John I. Brewer, M.D., 104 So. Michigan Ave., Chicago, not later than August 15, 1947. Purpose of the awards is to stimulate work in this field of medicine.

NAVAL RESERVE MEDICAL OFFICERS OFFERED ACTIVE DUTY

The Naval Air Reserve Training Command, with headquarters at Naval Air Station, Glenview, Ill., has 17 nationally located Naval Air Stations and four Naval Air Reserve Training Units at which Naval Reserve Medical Officers may serve on active duty with full pay and allowances and with the privilege of returning to eivilian life at any time on request. Additional details may be obtained from Chief of Naval Air Reserve Training, Naval Air Station, Glenview, Illinois.

CLASSIFIED ADS

FOR SALE. "Cardiotron" (model PC 1-A) and Fischer (model SWI-12) Intermediate Short Wave Apparatus. Key O, care of the Journal.

FOR SALE. Eight-room office, complete surgical equipment, medical supplies, and waiting room furniture for physician desiring to locate in Altus, Oklahoma. Key P, care of the Journal.

FOR SALE. One Gold Seal Diathermy with cabinet and drawers complete. One gas sterilizer. One Continental scales. Key Q, eare of the Journal.

ZEMMER pharmaceuticals
A complete line of labaratary cantrolled ethical pharmaceuticals.
Chemists ta the Medical Prafessian for 44 years.
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OK 6-47

Reminding people to "See Your Doctor"

Parke, Davis & Company believes that people need to be constantly reminded of the value of prompt and proper medical care. Educational advertisements—like the latest one, reproduced below—appear regularly, in color, in LIFE and other national magazines. Audience: more than 22 million people!

Some things you should know about "stomach ulcers"

No. 204 in a series of messages from Parke, Davis & Co. on the importance of prompt and proper medical care.



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DURING recent years there has been a sharp increase in the incidence of ulcer of the stomach.

Some doctors report that within eight years ulcer cases have increased by as much as 100%.

Though the exact cause of stomach ulcer is still unknown, it has been observed most frequently among people subject to nervous tension and anxiety—about four times as frequently among men as among women.

Fortunately, doctors today have a number of effective methods of treatment at their command.

Improved drugs have been developed to relieve pain and hasten healing. With modern methods of treatment, fewer restrictions are placed on the ulcer patient. Under proper medical supervision, the ulcer patient today can generally lead a nearly normal life. Seldom nowadays do doctors find it necessary to prescribe as rigid a regimen as was formerly indicated.

Your doctor keeps in constant touch with the new developments in ulcer therapy. His own experience and his understanding of the individual patient enable him to choose the treatment best suited to each case.

Stomach ulcers seldom develop without warning. A common symptom is stomach pain several hours after meals, or during the night. But any regularly recurring abdominal pain should be considered a signal that something may be wrong. And your best chance to escape serious trouble and lengthy illness lies in getting medical attention immediately.

SEE YOUR DOCTOR! If you have frequent stomach pains or "indigestion," don't dose yourself. You may get temporary relief from your symptoms, but the medication you use may actually make your ailment worse. See your doctor and let him decide the cause of your trouble. He alone is qualified to diagnose your case and recommend treatment. Ask his help at the first sign of something wrong.

Makers of medicines prescribed by physicians

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Research and Manufacturing Laboratories • Detroit 32, Mich.

Official Proceedings of House of Delegates Oklahoma State Medical Association

May 12, 1947

MINUTES OF THE FIRST SESSION
Tuesday, May 12, 1947

The first session of the House of Delegates meeting held May 12, 1947 at Tulsa, was called to order in the Ivory Room, Mezzanine of the Mayo Hotel at 2 P.M. by the Speaker of the House, Dr. George Garrison, Oklahoma City.

Following the call to order by the Speaker, the Chairman of the Credentials Committee, A. R. Sugg, M.D., Ada, stated that he and the members of the Committee had marked the Delegates present and that the records indicated a quorum was present.

The reading of the minutes of the last meeting of the House of Delegates was called for and the following motion was made after the statement by the Speaker that the minutes had been published in the Journal immediately following the 1946 meeting. It was *moved* by L. C. McHenry, M.D., Oklahoma City, *seconded* by O. E. Templin, M.D., Alva, that the minutes be accepted as published. The motion *carricd.*

Following the adoption of the above motion, the Speaker, in compliance with the provisions of Chapter III, Section 4, Subsection (a), of the By-Laws, appointed the following Reference Committees: *Resolutions Committee*: Bruce Hinson, M.D., Enid, Chairman; E. E. Rice, M.D., Shawnee; W. Jackson Sayles, M.D., Miami; James Stevenson, M.D., Tulsa; J. B. Hollis, M.D., Mangum. *Tellers of Elections*: W. W. Cotton, M.D., Atoka, Chairman; Paul Kernek, M.D., Holdenville; Jack F. Parsons, M.D., Cherokee. *Sergeant-at-Arms*: Carlton E. Smith, M.D., Henryetta; M. V. Stanley, M.D., Tulsa; William LaFon, M.D., Waynoka. *Amendment Committee*: Louis H. Ritzhaupt, M.D., Guthrie, Chairman; C. E. Northcutt, M.D., Ponca City; L. Chester McHenry, M.D., Oklahoma City.

The Speaker then stated that the next order of business would be the Reports of Officers. He first called on C. R. Rountree, M.D., Oklahoma City, Delegate to the A.M.A. Dr. Rountree said, in part:

"I assure you that this report will be brief. I should like for this House to take some action whereby you can have a report from the A.M.A. Delegates in somewhat less time than a year after the time of the meeting.

"The purpose of the last meeting was a consideration of the Rich Report. I have here a copy of the Rich Report for which the A.M.A. spent $50,000.00. This report contains a great deal of extremely valuable and useful information. (At this point Dr. Rountree read various excerpts from the Rich Report.)

"The only contemplation was in connection with the recommendation concerning the National Physicians Committee and that matter is being studied further and will be reported on at the Atlantic City Session. It indicated that perhaps the public relations program of the National Physicians Committee should not report in toto the public relations program of the A.M.A. We must tell the people what we have done — so much of the trend toward socialized medicine might be avoided.

"It was a very satisfactory meeting and the most important business was the Rich Report. If any of you care to read this, I have a copy that you may have."

Following the above report it was *moved* by W. W. Cotton, M.D., Atoka, *seconded* by Earl Woodson, M.D., Poteau, and *carried* that the report of the A.M.A. Delegate be *accepted.*

Dr. Garrison, Speaker, then called upon James Stevenson, M.D., Tulsa, also a Delegate to the A.M.A. for his report. Dr. Stevensou reported, in part:

"One thing I would like to bring up is the fact that one of the features in the 10 point program of the A.M.A. is the fostering of hospital insurance and prepaid medical care programs. The A.M.A. is extremely anxious to have all state societies participate in forming these programs and pushing them. It is the concensus of opinion that this is the best protective measure against socialized medicine.

"As you know, Oklahoma has the Oklahoma Physicians Service, which plan on May 1, had 31,188 members. It is a definite factor in the state and will become increasingly more so. This morning I signed checks in the amount of $3288.00 for surgical and obstetrical fees.

"The A.M.A. has an Association of Medical Care Plans which is extremely effective. It has set up standards of acceptances and Oklahoma's is one of the plans that met these standards. The doctors are receiving the plan with good grace and they are satisfied with it. I extend an invitation to all of you to visit the office at 910 S. Boston and see this set up."

Following the above report it was *moved* by Earl Woodsou, M.D., Poteau, *seconded* by E. H. Schuller, M.D., McAlester, and *carried* that the report of the A.M.A. Delegate be *accepted.*

(At this point the Councilor District and Committee Reports not previously published in the Journal were given. Publication of these will be deferred to a later issue of the Journal in order that the more urgent business of the proceedings may be given in this issue. Following the Councilor District and Committee Reports, a five-minute recess was declared. The official transcript continues as follows.)

Upon the call to order, the Speaker called upon Bruce Hinson, M.D., Chairman of the Resolutions Committee. Dr. Hinson read the Resolutions by title only (resolutions appear in another part of this report) stating that they would be read in detail at the Second Session for passage by the House.

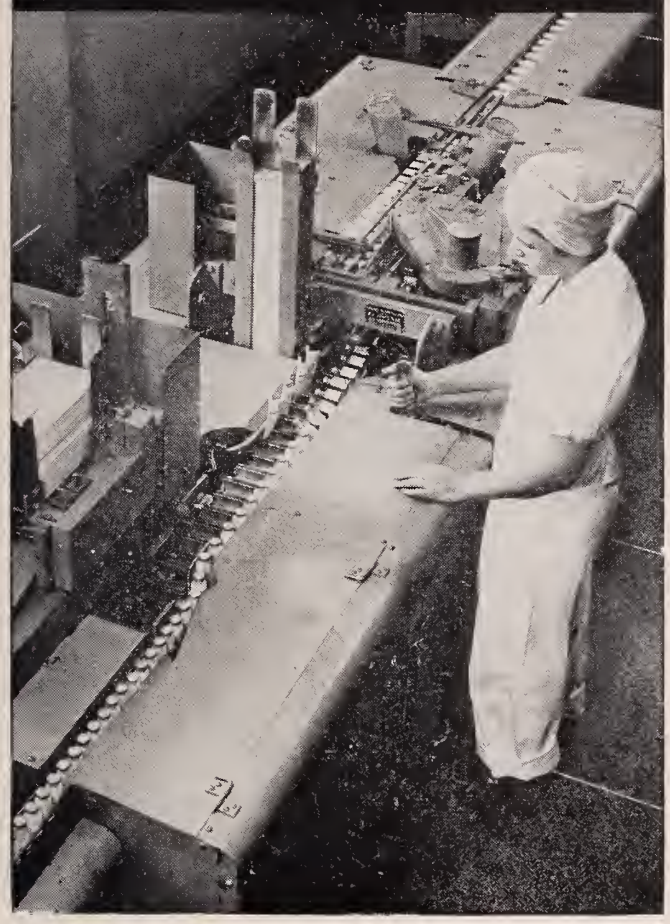
The Speaker stated that there were several Amendments to the Constitution and By-Laws which would be incorporated in the Council Report and that they would be read in detail and passed upon at the Second Session. He then called upon the President, L. C. Kuyrkendall, M.D., McAlester, for a reading of the Council Report.

Council Report

In submitting this report, the Council feels that now is an appropriate time for the House of Delegates to give careful consideration to the future of the medical profession and the Association as represented by the policies to be adopted by this House and followed by the Association during the coming year. One year ago, at the meeting of the House of Delegates, the results of the war were still being felt and readjustments were everywhere apparent. While there are still adjustments to be made, in the main, it is believed it can be assumed future planning must be on the basis of our present resources.

STREPTOMYCIN

Highly Effective Antibacterial Agent



CLINICAL INDICATIONS

Streptomycin is effective in the treatment of:

URINARY TRACT INFECTIONS, BACTEREMIA, and MENINGITIS due to susceptible strains of the following organisms:

Esch. coli ***A. aerogenes***
Proteus vulgaris ***Ps. aeruginosa*** (*B. pyocyaneus*)
Klebsiella pneumoniae (*Friedländer's bacillus*)

TULAREMIA
ALL *H. influenzae* INFECTIONS

Streptomycin is a helpful agent in the treatment of the following diseases, but its position has not been clearly defined:

Peritonitis due to susceptible organisms.

Pneumonia due to *Klebsiella pneumoniae* (*Friedländer's bacillus*).

Liver abscess due to streptomycin-sensitive, gram-negative bacilli.

Cholangitis due to streptomycin-sensitive, gram-negative bacilli.

Endocarditis caused by penicillin-resistant, streptomycin-sensitive organisms.

Tuberculosis.

Chronic pulmonary infections due predominantly to streptomycin-sensitive, gram-negative flora.

Empyema due to streptomycin-sensitive, gram-negative organisms.

★

Physicians now may obtain adequate supplies of this remarkable new antibacterial agent, without restriction, from their local pharmacists and hospitals.

STREPTOMYCIN
HYDROCHLORIDE
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Council Accepted

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MERCK MERCK

Following the recommendations of the last House of Delegates, the educational program in the public press has now been in operation for seven months. There have been eight amalgamations of county societies to strengthen their organizations. An Allied Professional Relations Committee has been appointed and has met with the other professions. Membership in the Association in 1946 was at an all-time high, a plan for the care of Veterans by local physicians will be announced at this meeting, the Scientific Program has been changed to give greater emphasis to the practice of medicine in other than the specialized fields, a news letter to the membership and the Auxiliary has been instituted to give greater coverage to the problems facing medicine on the economic and political fronts, a health and accident insurance program has been put into effect which will save the membership thousands of dollars. There are only a few of the activities not including public policy activities that have been carried on during the past year and yet do not constitute a single solution to a major problem facing medicine as viewed in the larger sense.

Every member of this House of Delegates must remember that as he goes about his task of practicing medicine there are many individuals and organizations who are constantly attempting to change the American way of rendering medical care and that constant vigilance is necessary.

Your Council makes the following report on its stewardship for the past year and certain recommendations for the House to consider as a program for the coming year.

Membership

The membership of the Association as of May 6, 1947, showed 1372 active members who have paid dues, this is in comparison with 1237 paid members as of April 15, 1946. There are still 22 members in the Armed Forces who are not as yet dues paying members, 31 honorary members and six associate members for a total membership, as of May 6 of 1431. Thirty two members did not pay the Special Assessment, and therefore are not eligible to continue their membership in 1947. Your Council, on January 29, 1947, notified all County Societies to submit the names of all members on which, in the opinion of the County Society, the payment of the special assessment would work a hardship, stating further that a request would be made to the House of Delegates to waive payment for all members so submitted. The County Societies submitted 15 names and the Council recommends that they be allowed to continue as members. Those members whose names were submitted have not been notified of such action for the reason that is obvious. However, any Delegate desiring to see the names may do so by requesting such privilege. The situation just stated called to the attention of the Council that in a very few instances there were members who could not qualify for honorary membership and who perhaps will even find the payment of dues difficult but who are too proud to ask assistance. The Council, in another part of its report, tried to correct this situation by an amendment to the By-Laws which will create a class of membership to be known as Life Members.

Budget

In compliance with Article IX, Section 2 of the Constitution, the Council submits the following budget for the coming year. Since dues must be set in advance of the known budget requirements for the year ahead, the budget herewith submitted is predicated on the anticipated revenue from the Journal and the membership with dues at $22.00. The budget also does not include any appropriation for the Public Policy and Publicity Committee, it being the opinion of the Council that the House of Delegates should make this appropriation from the surplus shown in the sudget.

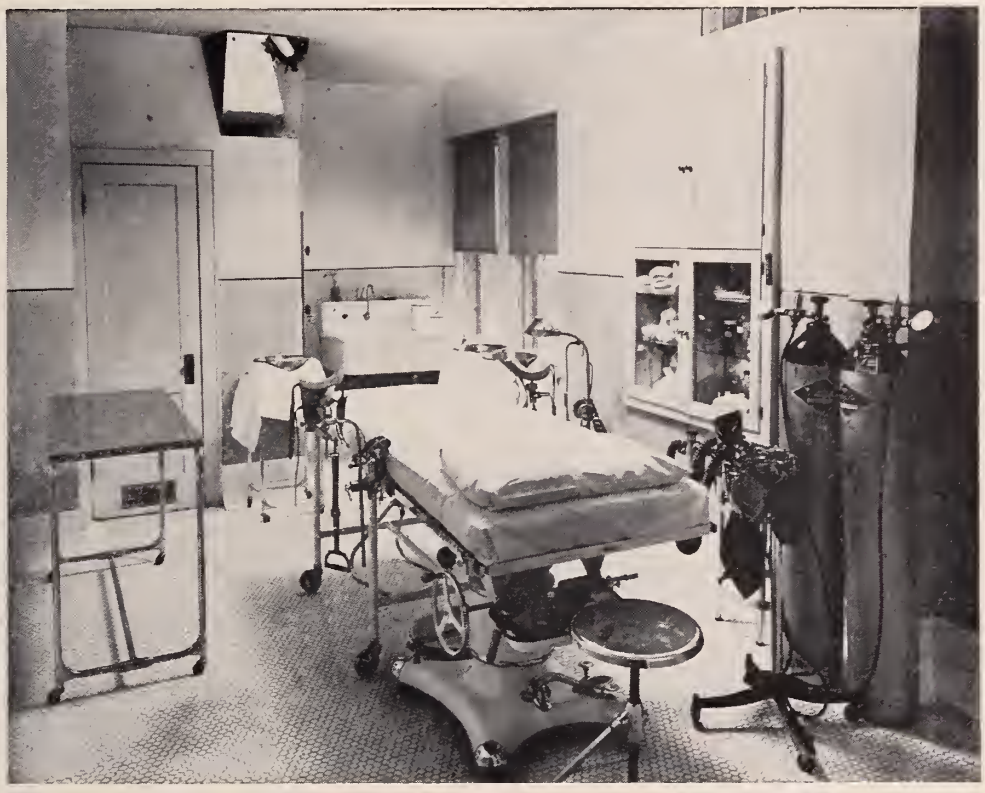
Journal Budget

Printing and mailing	$ 9,000.00
Salaries	6,920.00
Postage	54.00
Engraving	500.00
Office Supplies	300.00
Press Clipping Service	125.00
Stationery	50.00
Rent	300.00
Telephone and Telegraph	200.00
	$17,449.00
Revenue	$15,980.00
	—$ 1,469.00

Executive Office Budget

Journal Deficit	$ 1,469.00
Salaries	12,900.00
Telephone and Telegraph	400,00
Postage	750.00
Stationery and Printing	400.00
Office Supplies	400,00
Travel	1,200.00
Auditing and Legal	300.00
A.M.A.	1,500.00
Annual Secretaries Conference	350.00
Annual Meeting	1 200.00
Office Equipment	400.00
Rent	1,200.00
Postgraduate Committee	2,000.00
	$24,469.00
Income from dues	$30,188.00
Income from Investments, etc.	275.00
	$30,463.00
Expenses	$24,469.00
Surplus	$ 5,994.00

The Council is of the opinion that this order of business is the proper place to report to the House of Delegates a problem which it believes to be of major importance. Any member of this House of Delegates who has been closely associated with the Executive Office is fully aware of the constant pressure on the employees and particularly the Executive Secretary. At this time the Council wants the House of Delegates to know that in its opinion some type of retirement fund should be established for the employees. This method of preparing for the future is now accepted by any successful business or enterprise. The House of Delegates is advised that, due to the tax status of the Association, the employees are not entitled to social security benefits. Your Council is not yet ready to make a definite recommendation inasmuch as it is now studying retirement plans. Your Council recommends that if the budget is adopted that of the surplus, $1,500.00 a year be set aside for the purpose of creating some type of retirement fund. Your Council is not certain that it will take this amount of money and pledges the House of Delegates that it will exercise caution and economy before establishing any type of plan. The members of the Council know that to a great extent the direction of the Executive Office calls for the energies and alertness of a young man and that the reponsibilities of the position far overshadow personal likes or dislikes and certainly the time should never come when there would be embarrassment over the continuing of any employee in his or her position for sentimental reasons.



There Are Facilities for Safe, Comfortable Child-Birth at Polyclinic

THIS DELIVERY ROOM IS AIR-CONDITIONED

Physicians and patients alike find satisfaction in the air conditioned delivery room of Polyclinic's maternity department. In the moderately cool, refreshed air the patient is in better physical condition and free of perspiration. Physicians and nurses perform their work in cool comfort.

Polyclinic's delivery room was especially designed and is equipped in the most modern manner. There are facilities for the proper administration of gas, with its gratifying relief from pain. Every device for safe-guarding mother and child is at the physician's hand.

POLYCLINIC HOSPITAL

THIRTEENTH and ROBINSON OKLAHOMA CITY

MARVIN E. STOUT, M.D.
Owner

If the House of Delegates approves the setting aside of this fund it then will have a balance of $4,494.00 to appropriate for the Public Policy and Publicity Committee or to accrue to the reserves of the Association. Reserve funds held in the name of the Association in overnment Bonds amount to $12,398.88 and the Association had Cash on Hand as of January 1, 1947, $5,066.49 which represents surplus and prepaid dues. The Council is also of the opinion that in the near future additional storage space will be required for the records of the Association and for this reason there will be an additional rent expense to be considered.

Finances

The finances of the Association have already been mentioned and are in satisfactory condition for its present activities excluding consideration of the educational program.

Income from the Journal for 1947 will approximate that of 1946 but no estimate can be given for Journal revenue for 1948 inasmuch as the majority of advertising contracts are placed in the last quarter of the year.

The Council recognizes that it is the obligation of this House of Delegates to set the dues for the Association for the coming year. In view of the discussion that will come before this House at a later time, the Council will make not recommendations until a decision has been reached by the House of Delegates as to its desire in the matter of carrying on the work of the Public Policy and Publicity Committee. The Council, however, has been privileged to see the report to be made by this Committee and concurs in its statement that its work not be carried on by special assessment.

Executive Office

The Council wishes to urge that all members of the Association, when in Oklahoma City, make an effort to stop by 210 Plaza Court and visit the Executive Office. It is believed many will then have a better understanding of its activities.

The Office is now staffed by Mr. Graham and Mr. Fondren and three secretaries with an additional secretary in the office in the employee of the Postgraduate Committee.

In September of last year a postage meter machine was secured as a postage saver and it is interesting to note that from that date to May 1, 1947, 28,309 pieces of mail were sent out from the office. The daily average of letters in answer to correspondence received is approximately 21.

The Council calls to the attention of the House that in addition to the usual duties of the office that for the past year and a half it has been necessary for a representative from the office to devote two weeks out of every ten in the field to enroll physicians in the postgraduate courses. This, of course, is a savings to the Postgraduate Committee and in turn to the Association inasmuch as it has done away with the additional expense of a field director.

The Council also points with mutual pride of each member to the outstanding improvement that has been made in the Journal. With the securing of the Associate Executive Secretary it was possible to at long last give proper attention to this important phase of activity of the Association. It is the Council's opinion that we now have as fine a Journal as any state Association and compliments the Editorial Board for its work. The Council also cannot refrain from urging the membership to read the Journal. All too many times a member will say, "I knew nothing about such and such a program" when, in fact, full details had appeared in the Journal. It is for this reason that the Executive Office finds it necessary to make repeated releases to the County Societies.

Amendments to the Constitution and By-Laws

The Council has had under consideration changes to the Constitution and By-Laws in order to bring these instruments to date and the House of Delegates directed the Council to submit an amendment to the Constitution concerning the creation of Vice-Councilors to assist the Councilor. Your Council, in studying this direction is of the opinion that the Constitution need not be amended to make this latter provision possible. The Council has therefore had prepared an amendment to the By-Laws which it believes will suffice. Your Council is also of the opinion that the By-Laws should state the minimum number of physicians necessary to create and maintain a county society. An amendment along this line has been prepared. The Council in another part of this report will have additional comments to make concerning county society autonomy. The Council herewith submits these amendments for the consideration of the House of Delegates and recommends they be considered for action in the regular order of correct business. (Amendments appear in order in Second Session.)

1947-48 Program

In the past the Council, in making its report, has taken up subject by subject, certain problems and programs and made specific recommendations. These have covered such subjects as: educational programs; medical care for veterans; fee schedules; rural health; hospital construction; medical research; public health; postgraduate teaching; medical education; prepaid health services, etc. Your Council is going to follow this procedure only in part in this year's report since it is of the opinion that the Association and the individual physician must come to recognize that there must be a sound basic foundation on which to build and a direct objective to be obtained if any program is to succeed.

With this explanation your Council will let the specialized problems stand on the reports of the special and standing committees and attempt to integrate their recommendations into its recommended program for 1947-48.

As your Council views the problems in health that affect the people and in which the medical profession must participate it has come to the conclusion there are three fundamental principles that must be understood, adhered to and achieved. They are as follows:

1. A sound, compact and progressive Oklahoma State Medical Association.
2. A statement of principle and objective.
3. A plan for the support and attainment of the principle and objectives.

Obviously, the first recommendation means a revitalization of every part of the Association from the committees through the County Societies to the Council and the House of Delegates. As has been previously stated, six County Societies have formed District Societies but such paper action will not be successful unless the officers of the local societies follow through. In order that this program may move ahead, the Council recommends the following:

1. That, at the earliest possible date, all officers of County and District Medical Societies meet on the basis of their Councilor District affiliations and determine the identity of the County and District Societies within the District. The Council, in turn, to re-charter all County or District Societies and to review their Constitution and By-Laws for the purpose of coordination with the State Constitution and By-Laws.
2. That, at the time of the Meeting, referred to above that the officers of the County Societies

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perfect a Councilor District Organization with a President and Secretary and that there be at least one meeting each year for a discussion of the economic and social problems facing the profession.

3. That the individual Councilors continue the meeting with the officers of their County Societies following each meeting of the Council in order to advise the Societies of the actions of the Council and to receive suggestions and recommendations from the local societies.
4. That at the fall meeting of the Officers of County Medical Societies the President will call a meeting of all standing and special committees he deems necessary to work out programs for the coming year.

The Council fully realizes that these recommendations place a great responsibility on the individual members of the Council but each member of the Council has agreed to his part of such a program and in addition the full facilities of the Executive Office will be placed at the disposal of the Councilor, the County Societies, etc.

It is the opinion of the Council that if this ground work can be consummated that this Association will then be an effective organization for the purpose of protecting the health of the people.

Statement of Principle and Objectives

The Council realizes the depth and horizons that such a title could encompass and will make no attempt to outline an utopia. It does believe, however, there are certain principles and objectives that are basically fundamental to our problems in present day society.

The Council recommends as the principles those of the ten point program of the American Medical Association.

It recommends as immediate objectives the following:

1. Adequate medical care and health services for all the people.
2. An extension of public health services in the prevention of disease.
3. The establishing of a State Health Planning Board.
4. A closer liaison with the Allied Professions in accomplishing these objectives.

In discussing the first objective, your Council recognizes that adequate medical care and health services for all the people presents an age-old problem that probably in the strict sense of the word will never be solved but certainly the present situation can be improved upon. We must not be unmindful that certain segments of our federal government would like to attempt to solve this problem for the people at the tax payers' expense. As recently as May 5, President Truman reiterated his plea for compulsory health insurance. To start an attack on this problem your Council recommends the following.

1. That the University of Oklahoma School of Medicine immediately study its functions in preparing physicians for the practice of medicine and its obligation to the State of Oklahoma to investigate locally the students applying for admission insofar as possible.
2. That the University of Oklahoma School of Medicine study its policy of education as it pertains to the specialized fields versus general practice.
3. That this Association contact and consult with local communities concerning their willingness to cooperate in the locating of physicians in their areas.
4. That the State Association ask for the privilege of consulting and cooperating with the State Board of Health in the master planning for hospital construction under the Hill-Burton Bill.
5. That the Association give every assistance and impetus to the formulation of a state-wide hospital plan with the University Hospital as the parent hospital.
6. That the State Association and County Societies take a greater interest in understanding and promoting the non-profit insurance plans known as Blue Cross and Oklahoma Physicians Service which have been sponsored and endorsed by the State Association.
7. That the State Association and the County Societies through every avenue available seek to counsel with governing bodies concerning the proper handling of the indigent.
8. That where ever possible the County Societies work out local plans for handling emergency calls and the demands made upon the physician during other than his normal working hours.
9. That the State Association make an immediate survey and study as to the possibility of any physicians now practicing in the State who would be willing to relocate under desirable circumstances.

Your Council knows this is an ambitious program but by the same token believes that it is fundamental if any attack is to be made on the problem of adequate medical care for all the people.

The second objective, the extension of public health services in the prevention of disease, your Council believes to be a most important factor in medicine regaining its place in the esteem of the public. No longer can the profession assume the public to be uninformed on matters of health. All that is needed is for anyone to review present day literature coming into the average American home. Your Council makes the following recommendations in this field.

1. That the State Association and the County Societies work with the Board of Health in establishing full time county and district health units.
2. That the County Societies cooperate locally in public health programs in the schools, clubs and public and private agencies associated with the health fields.
3. That the County Medical Societies work with the public health officials or take the initiative themselves in improving general health conditions in their areas. This to include such matters as milk supplies, sewage, water supplies, etc. (One of the education programs releases will cover this field.)

Your Council is of the opinion that medicine's interest in the general health picture of the local community must be revitalized and the leadership assumed. The public is anxious to follow good sound leadership and in the field of public health and prevention of disease the profession has a tremendous source of potential public good will. At the same time lessening any demand for federal interference. The Council doubts there is any community in this State who cannot finance, support, and maintain its own health needs if proper scientific advice is available.

The Council's third recommended objective is for the establishing of a State Health Planning Board. This is not a new idea originating in the Council but rather the adoption of a program that has operated successfully in other states. Your Council wonders if this House will not agree that the general public knows too little about medicine's problems. Certainly if public support is to be on medicine's side in its fight for the principles it believes right, it must not hide its light in the age old



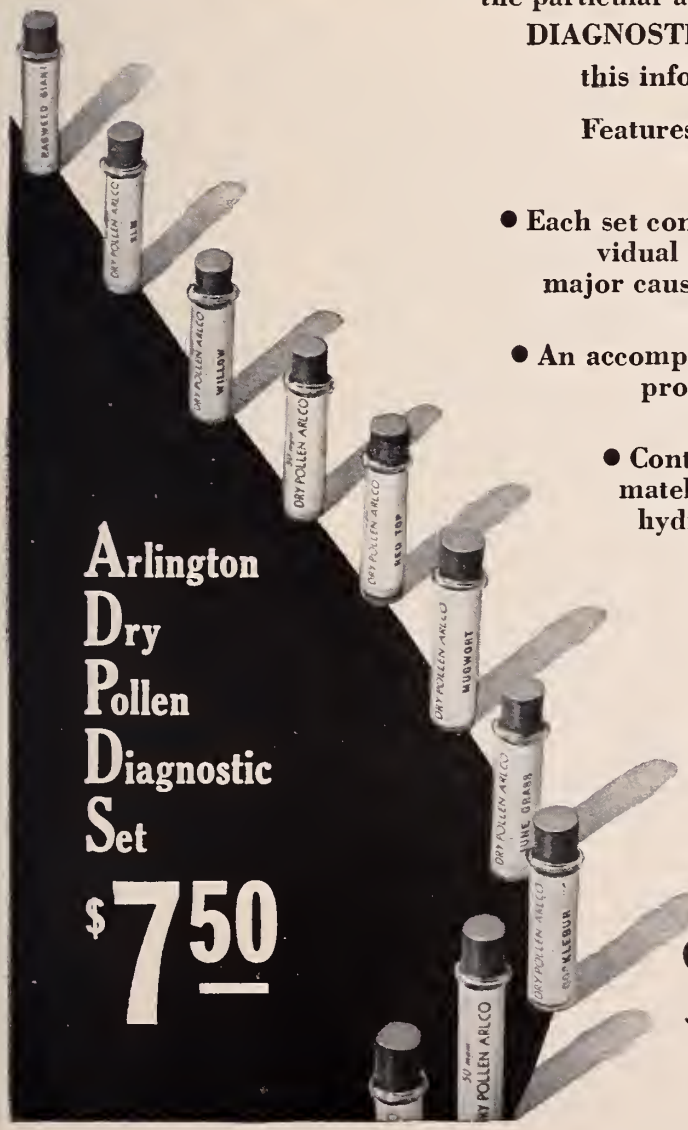
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basket. Your Council is so firmly convinced of medicine's position on principles that it believes representatives of business, labor, agriculture, the body politic, and the consuming public should be enlisted in medicine's fight for better health for all the people. Your Council recognizes that the inclusion of some groups named may seem inopportune but your Council is more convinced that the vast majority of people will do the right thing when the truths are known that it is willing to meet across the table with all segments of our population. Your Council would like to have the approval of this House of Delegates to proceed in this field of social-economic and political planning for better health.

Your Council's last recommendation is for a closer liaison with the allied professions. Here again is an old problem that is anxious to be solved. Your Council believes that the creation of the Allied Professional Relations Committee was an excellent step in the right direction. The problem of the allied professious are the problems of the medical profession. Some of the misunderstandings are petty in their foundation and come about through lack of discussion aud analysis. Your Council is of the opiniou that all societies where practical, should have an occasioual joint meeting with the allied professions and that all societies should have allied professional committees to be utilized iu discussing and solving differences and more particularly in unitiug their efforts for au improvement in their own economic lives and the betterment of service to the public.

In closing this report your Council realizes it has not discussed each objective individually but it does believe that they are in their owu right understandable. Your Couucil would also like to make a few general observations. It is firmly of the opinion that the promotion of the Oklahoma Medical Research Foundation must not fail. The success of this venture will do more to assist medicine in Oklahoma than anything else since statehood. Your Council is also enthusiastic about the possibilities of the University of Oklahoma School of Medicine under Dean Gray and it certainly does not want its recommendations concerning the School to be construed as criticism. As a matter of fact were it not for Deau Gray and his understanding character it is doubtful that the Council would have made the recommendations. Your Council is also extremely interested in the program for medical care of the Veteran by his local physician in cooperation with the Veteraus Administration. While your Council has uot been advised of the final report to be made by this Committee it nevertheless has had periodic reports and is confident that the Committee has worked on a sound basis. It recommeuds that every physician give his full cooperation. Your Couucil also feels that it should make some comment about the pareut organization, the A.M.A., siuce in the past the Council has at times been critical. Your Council has never questioned the A.M.A. on its stand in the field of scientific medicine. It has however, on occasion, disagreed with its public relations policy. Your Council, however, believes that this House should know that since the Rich Report was made to the House of Delegates of the A.M.A. in San Francisco that a great awakening has taken place. It is hoped that each of you will be able to stay and hear Dr. Roscoe L. Sensenich, the Chairman of the Board of Trustees of the A.M.A. who will be the Guest Speaker at the President's Inaugural Dinner Friday evening.

The Council also wants to compliment all physicians who responded to the Woodward disaster. All their names are not known but to each and every one may it be said that your spirit aud desire to help your fellow man exemplified the true creed of the profession.

Your Council is still further of the opinion that this disaster has shown the definite need for the establishment of some type of plan for the coordination of all agencies that are called upon to act in such emergencies. It would seem to the Couucil that at the earliest date possible there should be a meeting called by perhaps the Governor to discuss this definite need for the State of Oklahoma. The Council would suggest that all federal agencies such as the Army, Red Cross, etc., together with state organizations such as the National Guard, Highway Patrol and interested voluntary organizations such as Salvation Army, Veterans Organizations and this Association be coordinated in their efforts.

Your Council also wants to thank every member of all committees and the officers of the County Societies for the services they have performed. Yours are thaukless tasks but none could be more important.

The Council also wishes to express its deep appreciation to the Tulsa County Medical Society for the effort it has put forth in making this meeting possible, it knows that many obstacles had to be overcome.

In final conclusion the Council recommends the adoption of its report with the exception of the amendments to the Constitution and By-Laws it has recommended which cannot be considered until the Second Session.

After the readiug of the Council Report, Dr. Garrison, Speaker of the House made the following remarks: "As you will see, certain problems have been presented in this report. The report of the Public Policy Committee will follow. It is important that we have your reaction to the Public Policy Report as if you pass on the Council Report you will be passing the possibility of another reconsideration of dues. The Council feels that it is important that you have the report of the Public Policy Committee."

The Speaker then called upon McLain Rogers, M.D., Clinton, Chairman of the Public Policy Committee. Dr. Rogers stated that the Committee has worked long, hard, and seriously and had made a careful study of its problems. He stated that the House may find several matters of a controversial nature but that the report represented the best efforts of the Committee. Dr. Rogers then called upon Mr. Dick Graham, Executive Secretary to read the legislative part, Part I of the Public Policy Report.

Mr. Graham was recognized by the Speaker and read the following portion of the Public Policy Report.

Report of the Committee on Public Policy—Part I

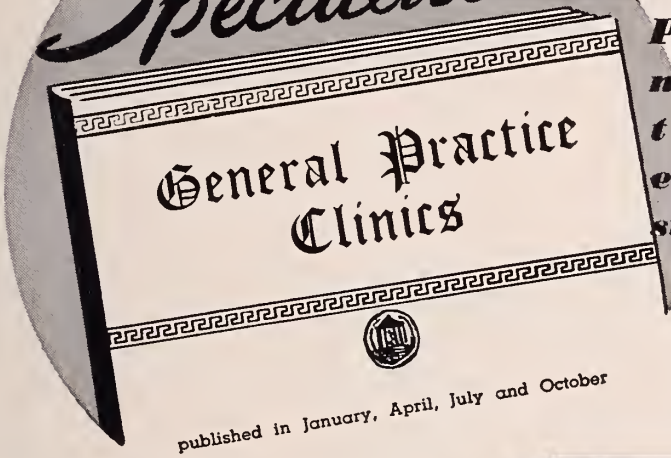
Your Public Policy and Publicity Committee desires to make the following report to the House of Delegates.

The report of the Committee is in two parts, one covering legislatiou on State and National levels and the other the educatioual program carried in the public press.

State Legislation: The Legislature that adjourned on May 8 considered the usual run of health bills and insofar as your Committee knows, no legislation detrimental to the health of the people was passed. Senate Bill 145 which would have recognized naturopathy as a branch of the healing arts and created a board was defeated in committee. House Bill 377 sponsored by the Association which would have created a Post-Mortem Commission met the same fate iu the Appropriations Committee of the House. Your Committee recommends that the Post-Mortem Bill be reintroduced in the next legislature if endorsement can be secured from other state organizations that should be interested. Senate Bill 122 was passed the last day of the Session. This bill is commonly known as the Mental Health Act and creates a five-man commission composed of the Chairman of the Board of Affairs, the Dean of the Medical School or someone designated by him, the Commissioner of Health, a psychiatrist who is a member of the American Board and

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a general medical physician to direct the care of hospitalized mental patients and operate preventive clinics. Appropriations for the School of Medicine were under the amounts asked for by the Board of Regents for Higher Education, which Board had already cut by approximately 20 per cent the amount asked for by the school. The final amount of money the school will receive will depend upon the allotment given by the Board of Regents for Higher Education. For those of the House of Delegates who are not acquainted with financing of higher education in this State may your Committee advise that all appropriations are made in one lump sum to the Board of Regents of Higher Education who in turn may or may not follow the appropriation allocations made by the legislature. Your Committee sent two letters on this subject to all members of the legislature and did all in its power to secure the amount asked for by the Medical School. Your Committee has been criticized for lack of greater contact with all physicians on this matter. Your Committee accepts this criticism and while it is of the opinion no amount of pressure could have changed the picture it will not again make the same mistake.

Your Committee does believe it wise to call to the attention of the House of Delegates three bills that were enacted into law. They are H.B. 226, H.B. 159, and H.B. 278.

H.B. 226 makes it, in addition to unethical, unlawful to advertise a price for any health service in which a prior diagnosis is necessary. This bill was believed necessary due to the recent experience with the National Optical Stores.

H.B. 159. This Bill makes it necessary that all persons practicing in the healing arts place after their names whenever their name will reach the public the school of the healing art to which he belongs. This means that all signs, prescription pads, stationery, etc., must be so identified. Doctors of medicine will of course, use M.D.; osteopaths, D.O.; dentists, D.D.S.; Chiropractors, D.C.; optometrists, O.D., and chiropodists, D.S.C. A full digest and explanation of this Bill will be sent to all physicians by the Board of Medical Examiners.

H.B. 278 was the health measure which had the most opposition. As a matter of fact, the opposition took drastic measures to defeat the Bill. This Bill makes it unlawful for any person holding themselves out in the healing arts to use the title of doctor unless they are in possession of an unrevoked license from one of the Boards in the healing arts. This, of course, will force the so-called naturopaths and physiotherapists to cease using the title of doctor. Here again the Board of Medical Examiners will give further publicity to the profession.

Your Committee urges that every physician cooperate immediately with the provisions of H.B. 159 and it is with a certain amount of blushing that your Committee admits that certain members of the Committee have found that for too many years they have been using only Doctor as identification of their profession. Certainly there cannot be a physician who will not be more than proud to so identify himself.

Your Committee does not intend to discuss all measures introduced in the legislature in which it was interested. In all there were 22 bills and it is with pardonable pride that your Committee reports that with the exception of appropriations for the Medical School and the Post-Mortem Commission Bill the balance of the measures met the fate desired. Your Committee herewith wishes to acknowledge and thank Dr. Ritzhaupt and Dr. Hennings who served in this session of the Legislature for their outstanding loyalty and service and without which the work of the Committee would have been exceedingly more difficult.

Your Committee has no legislative program to recommend for the next legislature other than has already been stated. Your Committee did receive in the last days of the session a communication from Tulsa County Academy of Pediatrics a recommendation that a bill for compulsory immunization be enacted by the Legislature. Your Committee would look with favor on such a resolution but points out such legislation needs support from the lay public.

National Legislation: At the present time the proponents of the Wagner-Murray-Dingell Bill which measure died with the last session of Congress have not as yet decided upon their new strategy. This does not mean, however, that the opponents of such legislation can become complacent. Legislation in the present congress in this field is being covered by the so-called Taft-Smith-Ball-Donnell Bill, Senate Bill 544, which measure is designed to omit some of the objectionable features of the Wagner-Murray-Dingell Bill. Your Committee is mailing an analysis of the Bill direct to all members of the Association and urges each member to give careful consideration to its contents. Your Committee is reluctant to make any recommendation concerning this measure until such time as it can have further information and study.

Your Committee is further of the opinion that the previous stands taken by the American Medical Association and the Oklahoma State Medical Association opposing federal intervention into medical care should be reaffirmed and so recommends.

Your Committee calls to your attention the National Hospital Construction Act known as the Hill-Burton Bill. This measure was passed by Congress at the last session but so far no appropriation has been made. It is anticipated, however, that the monies to be voted will be sufficient to pay for one-third the total cost of local hospital construction of a non-profit character if the community requesting aid can qualify under the rules and regulations that will be established. This program will be administered through the Board of Health. Your Committee recommends that each county medical society take the lead in directing its communities' thinking in this field. Unless this is done and they take this initiative, plans that do not meet the requirements of medicine may be the result.

In closing the first part of its report, your Committee wishes to commend the action of the Council in creating the Allied Professional Relations Committee and believe that work in this field will accomplish much.

Your Committee, recognizing that the second part of its report will be the subject of much discussion recommends that this portion of the report be adopted.

Respectfully submitted
McLain Rogers, M.D., Chairman

General discussion followed Mr. Graham's presentation of Part I of the Public Policy Report. Upon *motion* by R. Q. Goodwin, M.D., Oklahoma City, *seconded* by Roy Emanuel, M.D., Chickasha, a vote of thanks was extended to Louis H. Ritzhaupt, M.D., Guthrie, a member of the Senate of the last Legislature.

Upon *motion* by James Stevenson, M.D., Tulsa, *seconded* by J. G. Edwards, M.D., Okmulgee, the legislative portion of the Public Policy Report was accepted.

It was the opinion of the House and of the Officers that, due to the lateness of the hour that the Second Part of the Public Policy Report be held over until the Second Session, the remaining items of business to be taken care of before adjournment of the First Session.

The Speaker then called for a reading of an invitation to the Oklahoma State Medical Association to hold its

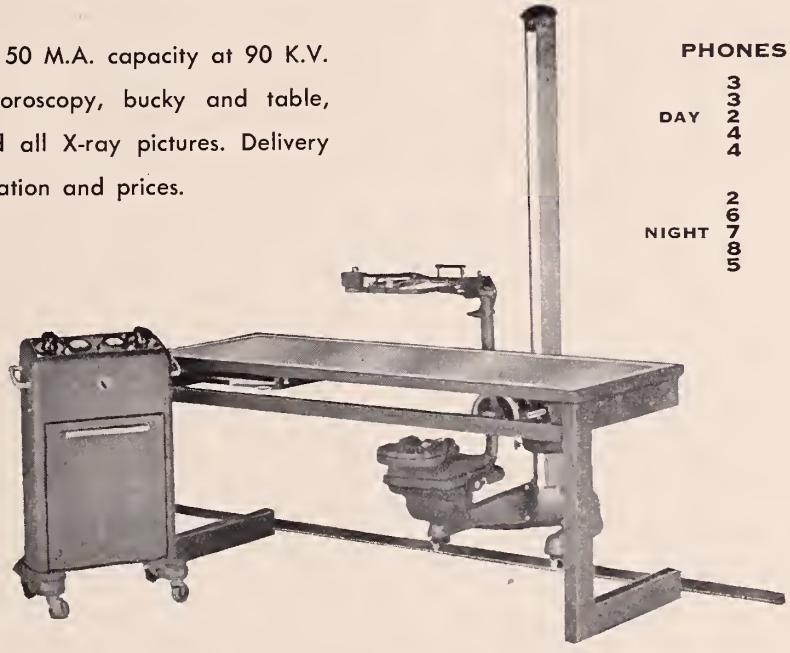
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1948 Annual Meeting. The following letters were presented and read by the Speaker.

Dr. George H. Garrison
Speaker of the House of Delegates
Oklahoma State Medical Association
Mayo Hotel
Tulsa, Oklahoma
Dear Doctor Garrison:

In behalf of the Oklahoma County Medical Society it is my pleasure to extend a most cordial invitation to the Oklahoma State Medical Association to hold the 1948 meeting in Oklahoma City.

Yours very truly,
OKLAHOMA COUNTY MEDICAL SOCIETY
F. Redding Hood, M.D., President

Oklahoma State Medical Association
Mayo Hotel
Tulsa, Oklahoma
Gentlemen:

The Oklahoma City Chamber of Commerce is happy to join with the Oklahoma County Medical Society in extending a cordial invitation to the Oklahoma State Medical Association to hold its 1948 convention in Oklahoma City.

Yours is one of the most welcome groups to meet in Oklahoma City. We have come to look forward to your visits and will be happy to see you again in 1948.

Sincerely yours,
J. S. Hargett, President

Upon *motion* by O. E. Templin, M.D., Alva, *seconded* by F. W. Boadway, M.D., Ardmore, the above invitations were *accepted.*

The Speaker then reminded the House that the Delegate to the A.M.A., C. R. Rountree, M.D., Oklahoma City, had expressed a desire that some arrangement be authorized whereby the Report of the Delegate could be presented some time prior to a year after the meeting.

E. H. Shuller, M.D., McAlester *moved* that the Report of the Delegates to the A.M.A. be presented to the Council immediately following a meeting of the A.M.A. The motion was *seconded* by O. E. Templin, M.D., Alva, and *carried.*

The Speaker then read the following applications for Honorary Membership, stating that all were in order and had been approved by action of the Council.

A. W. Pigford, M.D., Tulsa
E. F. Lewis, M.D., Ada
D. W. Bennett, M.D., Sentinel
K. D. Gossom, M.D., Clinton
B. T. Bitting, M.D., Enid
W. H. Shipman, M.D., Bartlesville
S. G. Weber, M.D., Bartlesville
W. W. Kerley, M.D., Anadarko
J. E. Hughes, M.D., Shawnee (now deceased)
W. L. Stephenson, M.D., Aline (now deceased)

Upon *motion* by L. C. Kuyrkendall, M.D., McAlester, *seconded* by John F. Burton, M.D., Oklahoma City, these names were *elected* to Honorary Membership.

The Speaker then read the following application and suggestion for Associate Membership.

Bernard Lowenstein, M.D., Shawnee
Oliu West, M.D., Chicago

Dr. Garrison stated that, through error on the part of the Executive Office, the name of Dr. Lowenstein had not been published in the Journal but was in order and had approval by Council action. He asked the pleasure of the House as to suspeuding the rule of publication and approving Dr. Lowenstein's application at the same time as voting on Associate Membership of Dr. West.

Upon *motion* by Clinton Gallaher, M.D., *seconded* by Ned Burleson, M.D., Prague, said rules were suspended and Dr. Lowenstein and Dr. West were *elected* to Associate Membership.

The Speaker then read the followiug Amalgamations of County Societies, stating that all were in order and had been approved by Council action.

Change in name of Woodward to Northwestern
Ottawa-Craig
Kay-Noble
Atoka-Coal-Bryan-Johnson
Choctaw-McCurtain-Pushmataha
Payne-Pawnee

On *motion* by Philip Risser, M.D., Blackwell, *seconded* by Ellis Lamb, M.D., Clinton, the above amalgamations were *approved.*

The Speaker then read the following Call to the A.M.A.

Official Call

To the Officers, Fellows and Members of the American Medical Association

The ninety-sixth annual session of the Americau Medical Association, which will celebrate its centennial year, will be held in Atlantic City, New Jersey, from Monday, June the ninth to Friday, June the thirteenth, Niueteen hundred and forty-seven.

The House of Delegates will convene on Monday, Juue the ninth.

The Scientific Assembly of the Association will open with the General Scientific Meetings held on Monday, June the ninth, at 2 P.M.

The General Meeting at which the President will be installed will be held on Tuesday, June the tenth, at 8 P.M.

The various sections of the Scientific Assembly will meet Wednesday, June the eleventh at 9 A.M. aud at 2 P.M. and subsequently according to their respective programs.

Harrison H. Shoulders, President
R. W. Fouts, Speaker, House of Delegates

Attest:
George F. Lull, Secretary
Chicago, Illinois, March the fifteenth.

Upon *motion* by W. W. Cotton, M.D., Atoka *seconded* by O. E. Templin, M.D., Alva, the above Call was *accepted.*

The meeting was declared *adjourned* by the Speaker to *reconvene* at 8 P.M. for the Second Session in the Ivory Room, Mezzanine, Mayo Hotel.

MINUTES OF THE SECOND SESSION

The Second Session of the 54th Annual Meeting of the House of Delegates was called to order by the Speaker, Dr. George H. Garrison, Oklahoma City, at 8 P.M. Tuesday, May 12, Ivory Room, Mezzanine Floor, Mayo Hotel, Tulsa, Oklahoma.

Following a roll call by the Credentials Committee, the Committee announced a quorum present and the report was accepted.

The Speaker stated that he had neglected, in the First Session, to set a time of election of officers. He further stated that this time, insofar as possible, would be set at 9:30 P.M.

The first order of business was the portiou of the Public Policy Committee Report that was not read at the first session. The Speaker recognized John F. Burton, M.D., Oklahoma City, who read the following report:

Report of the Public Policy Committee—Part II

The second part of this report deals with the educational program carried on through the press.

Your Committee wishes to call to your attention that



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at the time the program was adopted last year by the House of Delegates, it was clearly stated that the project was experimental, that it would be tried for a period of time, and the future of the program would be left to the next meeting of the House of Delegates. The time has now arrived for this decision.

Your Committee is certain the program has not pleased everyone nor has it been perfect. However, your Committee is of the opinion the program has been effective when consideration is given to the editorial comment received and the response the public made to the recent Blue Cross and O.P.S. ad. Over 200 letters from 68 different communities in 47 counties were received in the office of the Association from the Blue Cross and O.P.S. presentation. One physician has advised the Chairman of the Committee of a personal survey wherein he found 22 people out of 89 had seen the ads. Let us assume that a minimum of 20 per cent of newspaper readers have read these ads. When consideration is given to the fact that the paid circulation of the papers is over 1,250,000 it can be deducted that approximately 240,000 people have been contacted each month by the medical profession. This is good public relations.

Your Committee further realizes that this House of Delegates should and must give its consideration to a public relations program and for this reason makes the following recommendations:

1. That a public relations program be maintained, the type of program to be decided by the House of Delegates.
2. That any program adopted be financed by other than special assessment.

Due to the certain discussion that will be given to this activity of the Association your Committee will refrain from a more complete written report but will make additional comments at the time the program is under discussion.

The following constitutes the additional comments your Committee desires to make before throwing the subject open to discussion.

Your Committee reports that money collected by the special assessment amounted to $33,225.00. The ads are costing approximately $2,600.00 a month and a surplus of approximately $2,000.00 can be anticipated. Obviously the House of Delegates must act on this contingency.

Your Committee realizes that some members believe the medium of radio should be used. For the information of the House of Delegates the cost of radio time is very expensive. Five minutes on KVOO, Tulsa, and WKY, Oklahoma City, amount to approximately $32.00 for WKY and $42.50 for KVOO, fifteen minutes approximately $55.00 for WKY and $60.00 for KVOO. If the Oklahoma network were used, which comprises seven of the small stations in Oklahoma, the cost is approximately $71.40 for five minutes and approximately $114.00 for fifteen. There is also the possibility of the Association endorsing programs and having them sold to other sponsors. Your Committee frowns on this type of financing believing that the profession should pay its own way.

There is also the field of debate, orations and essays in the schools. Your Committee cannot recommend this program for reasons too numerous to mention but principally due to the fact the field of compulsory health insurance has just been covered in the junior and senior highschools, as well as the colleges.

Your Committee has been privileged to see the report of the Council concerning the budget and believes the Council has pursued a wise course not only as to the use of the surplus but refraining from recommending the amount of dues until the House of Delegates has disposed with this Committee report. Without your Committee making a specific recommendation as to dues or the money to be spent for a public relations program your Committee would like to give the House of Delegates the following information on dues in other states. This information was sent to the county societies at the beginning of the year but perhaps a few delegates did not study the survey.

Your Committee in closing its report would remind the House of Delegates that in its opinion the subject of public relations for the medical profession will continue to increase in importance as the years come on. Your Committee has prepared some posters to show the results of the program in the press. Your Committee is also going to impose on the House of Delegates to have a short paper prepared by Dr. W. H. Miles of Oklahoma City and recently read before the Oklahoma City Academy of Medicine. Following these presentations your Committee desires the House of Delegates after calm deliberation to instruct this Committee on its future operations. Let none of us forget that we have three principle objectives to accomplish.

1. To help preserve the American way of life.
2. To continue to merit the confidence of the public.
3. To perpetuate our profession for those who are to come after us.

Respectfully submitted,
McLain Rogers, M.D., Chairman
For the Committee

At the conclusion of this report Dr. Garrison made the following remarks:

"You have had the report of the Public Policy Committee. As your Speaker sees it there are two recommendations, namely:

1. It is the recommendation of this Committee that the Association maintain a Public Relations Program.
2. If such a Program is to be maintained, whatever its form, that it be financed by some other means than special assessment.

"It seems to the Chair that there should be discussion of these matters. Insofar as possible we should like to have everyone express his opinion, in that you try to limit your remarks to the points involved and without being arbitrary, it seems that five minutes should be long enough for any individual to speak.

General discussion followed. Some of those participating were as follows: M. P. Prosser, M.D., Norman; O. C. Standifer, M.D., Elk City; Ralph Rucker, M.D., Bartlesville; Philip Risser, M.D., Blackwell; W. W. Cotton, M.D., Atoka; James Hood, M.D., Norman; Malcolm Phelps, M.D., El Reno.

At this point in the discussion, upon *motion* by Philip Risser, M.D., Blackwell, *seconded* by F. W. Boadway, M.D., Ardmore, it was voted to maintain a Public Relations Program in accordance with the Public Policy Committee's recommendation. This motion *carried.*

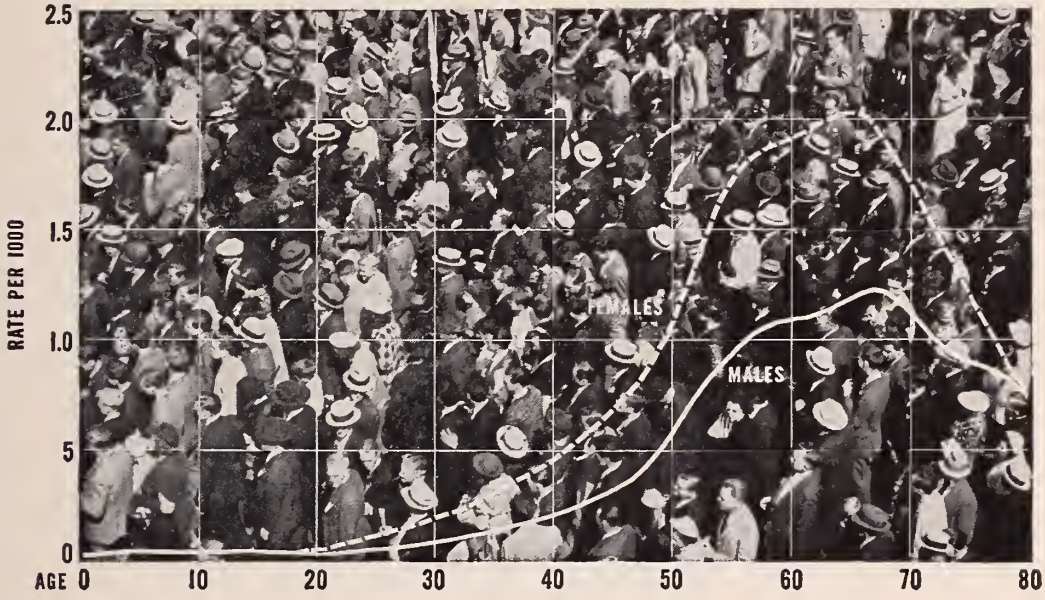
Further discussion was participated in by Clinton Gallaher, M.D., Shawnee; John B. Morey, M.D., Ada; John F. Burton, M.D., Oklahoma City; F. Keith Oeschlager, M.D., Yale; McLain Rogers, M.D., Clinton; O. E. Templin, M.D., Alva; Lewis J. Moorman, M.D., Oklahoma City.

The Speaker then remarked, "The recommendation of the Committee that this Program be financed by other than special assessment must be remembered. For your information there are three ways of receiving money in the Association. One, by dues; Two, by assessment; and Three, by special donation. It is the recommendation that it be financed by other than special assessment."

Upon *motion* by O. C. Standifer, M.D., Elk City, *seconded* by O. E. Templin, M.D., Alva, it was voted

WITHIN THE YEAR: 50,000 *new diabetics*

CHANCES PER THOUSAND OF BECOMING DIABETIC WITHIN THE YEAR OF AGE. Adapted from Statistical Bull.2



Of our present population, about 4,000,000 will become diabetic sometime in their lives. More than 4% of females and 2% of males under 50 will acquire the disease. With an increase of 50,000 a year, their number will grow in the next few decades at a rate greater than that of the total population. When our population reaches its expected maximum in 1985, it will be 22% larger than in 1940—but by then the diabetic population may increase by 74%![1,2]

Control with but *one injection a day* of 'Wellcome' Globin Insulin with Zinc has been made possible for many diabetic patients who formerly required *multiple injections* of regular insulin alone or in conjunction with protamine zinc insulin. Favorable results with Globin Insulin have been achieved by virtue of the following advantages:

1. The action of Globin Insulin is *intermediate* between that of regular and protamine zinc insulin.

2. Its onset of action is moderately rapid; no accompanying injection of regular insulin is ordinarily required to take care of breakfast carbohydrate.

3. Maximum activity of Globin Insulin occurs during the day when the patient needs insulin most to balance carbohydrate intake. This contributes to a relatively uniform blood sugar level.

4. The action of Globin Insulin wanes during the night. Since the patient is not eating and has less need for insulin at this time, the danger of hypoglycemic night reactions is remote. However, adequate action persists up to the 24th hour so that a normal fasting blood sugar level is ordinarily obtained the following morning.

5. The globin constituent does not appear to be allergenic. It is thus comparable to regular insulin in its freedom from allergic reactions.

6. Globin Insulin is a clear solution which requires no mixing or shaking before use. The danger of variable dosage is thereby minimized.

'Wellcame' Glabin Insulin with Zinc is available in 40 and 80 units per cc., in vials af 10 cc. Accepted by the Cauncil an Pharmacy and Chemistry, American Medical Associatian. Develaped in The Wellcame Research Labaratories, Tuckahae, New Yark. U.S. Patent Na. 2,161,198.

1. Spiegelman, M., and Marks, H. H.: Am. J. Pub. Health 36:26 (Jan.) 1946. 2. Statistical Bull., Met. Life Ins. Ca. 27:6 (Feb.) 1946.

'Wellcame' Trademark Registered



BURROUGHS WELLCOME & CO. (U.S.A.) INC., 9 & 11 EAST 41ST STREET, NEW YORK 17, N.Y

that the necessary funds be raised by dues increase. The motion *carried.*

C. M. Hodgson, M.D., Kingfisher, and John Morey, M.D., Ada, went on record as opposing this action.

The Speaker asked that the members of the Council be excused in order to arrive at a figure for the dues increase. The Council members withdrew for a few minutes and Dr. A. R. Sugg, Ada, was asked to preside during the absence of the Speaker.

The next order of business was the report of the Reference Committees. The first to be called to report was the Resoluions Committee, Bruce Hinson, M.D., Enid, Chairman. Dr. Hinson read the followiug Resolutions.

Resolution
The Oklahoma Medical Research Foundation

WHEREAS the health of the people is the ultimate goal of the medical profession; and

WHEREAS progress toward this goal cannot be achieved by daily practice alone, but major advances must come as the result of long hours of research in laboratory and clinic; and

WHEREAS interested and civic-minded Oklahoma Citizens have recently established the Oklahoma Medical Research Foundation, which is dedicated to the pursuit of scientific truth which may be employed in relieving the suffering of the sick and injured; and

WHEREAS the work of this Foundatiou must be of the greatest interest and importance to all Oklahoma physicians because of the ultimate rewards it offers them, both on the financial and scientific level.

THEREFORE BE IT RESOLVED that the Oklahoma State Medical Association go on record as heartily favoring the proposed program of the Oklahoma Medical Research Foundation in its campaigu against those diseases which are the great enemies of mankind, and that the Association assure the Foundation of its continued interest aud support in any manner possible in the future operations of the Foundation.

Upon *motion* by Dr. Hinson for the Resolutions Committee, *seconded* by William Lafon, M.D., Waynoka, this Resolution was *approved.*

Resolution
Tinker Field Medical Department

WHEREAS the disastrous tornado which struck at Woodward, Oklahoma, ou April 9, 1947, brought death and suffering to hundreds of Oklahoma citizens; and

WHEREAS in this emergency and desperate need, the Medical Department of the Army Air Forces facilities at Tinker Field played a most commendable part in relieving the distress and suffering of the wounded, evacuating the injured, and helping to organize relief work among the survivors.

WHEREAS the death toll was no doubt greatly lowered by the speed and efficiency with which medical aid was rendered by Army physicians and officers who labored long hours without sleep or relief, thus fulfilling the highest traditions of the medical profession.

THEREFORE BE IT RESOLVED that the Oklahoma State Medical Association go on record as highly commending the part played by the Medical Department of Tinker Field in this work of mercy to the stricken citizens of the disaster area in both Oklahoma and Texas.

BE IT FURTHER RESOLVED that copies of this resolution be sent to the Commanding General of Tinker Field.

Upon *motion* by Dr. Hinson for the Resolutions Committee, *seconded* by J. G. Edwards, M.D., Okmulgee, this Resolution was *approved.*

Resolution
Board of Health

WHEREAS the State Board of Health, as created by the 20th Legislature of the State of Oklahoma, and composed of a majority of members who are duly liceused physicians and members of the Oklahoma State Medical Association, was charged with the supervisory functions in all matters having to do with the health of the citizenry, and,

WHEREAS they are placing public safety above personal gain and have thereby furthered the interests of public health, and

WHEREAS their activities have resulted in improved health conditions in all sections of the State and are coutinuing to safeguard the people of Oklahoma against disease and malnutrition.

NOW THEREFORE BE IT RESOLVED that the Oklahoma State Medical Association recognize the accomplishments of the State Board of Health and commend the members of the Board for the service they are rendering.

Upon *motion* by Dr. Hinson for the Resolutions Committee, *seconded* by McLain Rogers, M.D., Clinton, this Resolutions was *approved.*

Resolution
National Physicians Committee

WHEREAS the Oklahoma State Medical Association believes that the aggressive, well-planned efforts of the National Physiciaus Committee have been a vital factor iu preserving the private practice system for the professions and the American Way of Life, and

WHEREAS the continuation and expansion of these efforts are vital to the moulding of an informed public support of mediciue's program,

NOW THEREFORE BE IT RESOLVED that the Oklahoma State Medical Association endorse the activities of the National Physicians Committee and urge its individual members to give it their maximum financial and moral support.

Upon *motion* by Dr. Hinson for the Resolutions Committee, *seconded* by W. A. Howard, M.D., Chelsea, this Resolutions was *approved.*

Resolution
Postgraduate Education

WHEREAS the House of Delegates of the 54th Annual Session of the Oklahoma State Medical Association desires to express appreciatiou and thanks to the Oklahoma State Health Department for their finaucial support in making possible the postgraduate programs in the State of Oklahoma, and

WHEREAS. it is the opiuion of the House of Delegates, from numerous letters, comments, and resolutions from Couuty Medical Societies, that hundreds of physicians in our medical profession have benefitted by reason of the postgraduate program in Oklahoma.

NOW THEREFORE BE IT RESOLVED that we request that a copy of this resolution be sent to Dr. Grady F. Mathews, Commissioner, Oklahoma State Health Department, whose valued assistance to the profession in Oklahoma has been noted.

Upon *motion* by Dr. Hinson for the Resolutions Committee, *seconded* by Roy Emanuel, M.D., Chickasha, this Resolution was *approved.*

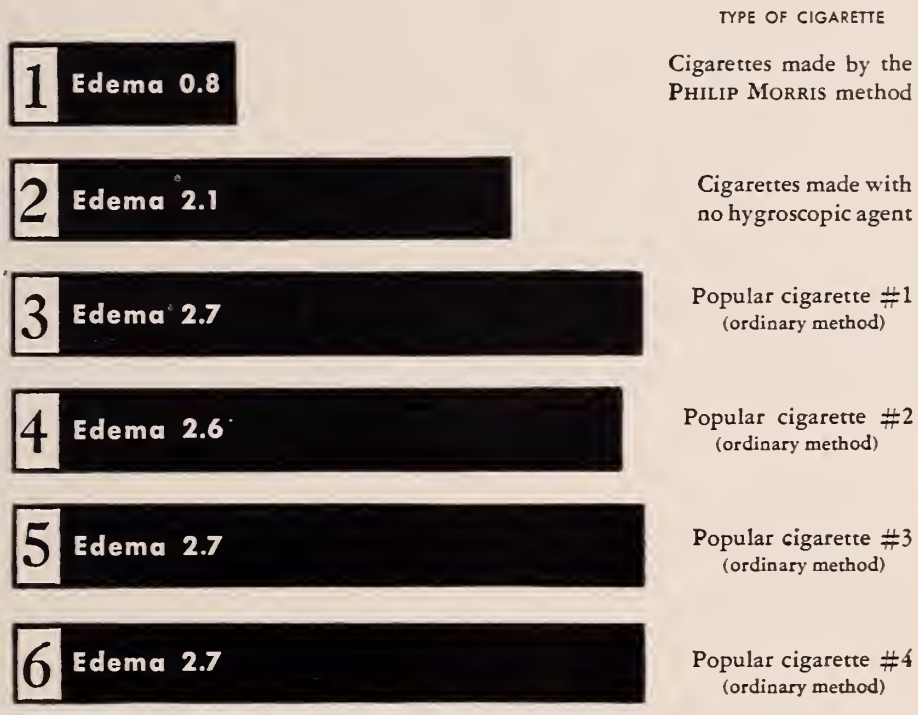
Resolution
The Commonwealth Fund

WHEREAS the House of Delegates in the 54th Annual Session of the Oklahoma State Medical Association desires to go on record and express appreciation to The Commonwealth Fund of New York for their liberal financial support in making possible the postgraduate instruction in obstetrics, pediatrics, internal medicine, surgical diagnosis, and gynecology in the State of Oklahoma, and

WHEREAS from resolutions of County Medical So-

How irritation varies from *different* cigarettes

Tests made on rabbits' eyes reveal the influence of hygroscopic agents*



CONCLUSION:* Results show that regardless of blend of tobacco, flavoring materials, or method of manufacture, the irritation produced by all ordinary cigarettes is substantially the same, and measurably greater than that caused by PHILIP MORRIS.

CLINICAL CONFIRMATION:** When *smokers* changed to PHILIP MORRIS, substantially every case of irritation of the nose and throat due to smoking cleared completely or definitely improved.

N. Y. State Journ. Med. 35 No. 11,590* *Laryngoscope 1935, XLV, No. 2, 149-154*

TO THE PHYSICIAN WHO SMOKES A PIPE: We suggest an unusually fine new blend—COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

cieties, comments of individual physicians, and the enthusiasm in the course in gynecology now in progress

NOW THEREFORE BE IT RESOLVED that it is apparent that hundreds of physicians throughout the state are appreciative of, and have benefitted by reason of these courses, and

BE IT FURTHER RESOLVED that we request a copy of this resolution be sent to The Commonwealth Fund of New York.

Resolution
James D. Osborn, M.D.

WHEREAS most of the doctors of medicine practice with the thought of service to suffering humanity as their great objective; many also think it their duty to give back to medicine something they receive from it, and

WHEREAS, in no sense as a duty, but as a high privilege, James D. Osborn, Jr., M.D., gave much back to his profession, and

WHEREAS he gave back to it his sincerity, his integrity, his high-mindedness, and his dignity. With these qualities he also labored hard and courageously to maintain and advance the high ideals of our profession, and

WHEREAS his year as President of the Oklahoma State Medical Association was an outstanding one in our history, and

WHEREAS his unselfish, tireless work as Secretary of the State Board of Medical Examiners and of the Basic Science Board will live in Oklahoma history as a goal to attempt to equal, by his successors. He was a kindly man, who loved people, and

WHEREAS his untimely death leaves him enshrined in the hall of fame of Oklahoma medicine.

NOW THEREFORE BE IT RESOLVED that the Oklahoma State Medical Association deeply regrets his passing, and wishes this humble tribute be recorded in the records of our Association, and copies sent to his immediate relatives.

In honor to Dr. Osborn, the above Resolution was approved unanimously without the formality of motion.

Resolution
American College of Surgeons

WHEREAS, the American College of Surgeons has decreed that approved hospitals must hold staff meetings in each of the calendar months and

WHEREAS, we believe this requirement was laid down without due consideration of the hardship it works on the attending staff members during the hot summer months, especially where a physician is on the staff of more than one hospital, and

WHEREAS, being forced to attend such meetings under these conditions does not tend to develop the most helpful type of program,

NOW THEREFORE BE IT RESOLVED that the House of Delegates of the Oklahoma State Medical Association, in regular session assembled, go on record as opposed to required hospital staff meetings during the summer months and respectfully request that the American College of Surgeons return to the former schedule of hospital staff meetings

AND BE IT FURTHER RESOLVED that a copy of this Resolution be forwarded to the American College of Surgeons and the American Hospital Association and the American Medical Association.

Upon *motion* by Dr. Hinson for the Resolutions Committee, *seconded* by O. E. Templin, M.D., Alva, this Resolution was *approved*.

Resolution
Clarification of Rules Relating to Medical Service Fees Received from the Federal Government

WHEREAS, many members of the American Medical Association are now being remunerated financially by various branches of the Federal Government as the result of pension rights or retirement pay from the Army or Navy and for services rendered as Veterans Administration Consultants, teachers in Veterans Administratoin Institutions, experts in Federal Compensation cases or as participants in "Hometown Care Plans"; and

WHEREAS, much confusion now prevails regarding the numerous rules, regulations, and directives of the various branches, bureaus, agencies, and commissions of the Federal Government; and

WHEREAS, the receipt of income from one branch of the Federal Government would seem in certain instances, to preclude the acceptance of fees from other branches of government.

NOW THEREFORE BE IT RESOLVED, that the House of Delegates of the American Medical Association instruct the editor of the Journal of the Association and the Bureau of Legal Medicine and Legislation to collect, annotate, analyze, interpret, and publish a digest of all the rules and regulations of the Federal Government pertaining to medical practice and medical service fees.

Upon *motion* by Dr. Hinson for the Resolutions Committee, *seconded* by Mack I. Shanholtz, M.D., Wewoka, this Resolution was *approved*.

Resolution
Change of Policy of American Specialty Boards

WHEREAS, certain of the American specialty boards not only refuse to grant credit for experience and training acquired in the field of general practice, but have also recently announced discontinuance of their former practice of according credit for preceptorships with a certified diplomate and have ruled instead that every applicant for certification must serve a lengthy residency following his internship; and

WHEREAS, this recent change in policy constitutes an unfair imposition on many returned medical veterans and other young physicians who find it impossible to obtain such residencies; and

WHEREAS, doctors entering the various specialties without any experience or training in the field of general practice find it difficult, if not impossible, to develop a broad over-all understanding of the field of medicine as a whole, and

WHEREAS, general practice offers unique opportunities for the development of individual initiative, self reliance, personality development and professional growth; and

WHEREAS, it is the opinion of the American Medical Association that general practice and preceptorships are two of the best methods of teaching the art of medicine; and

WHEREAS, qualified and experienced preceptors already certified by these boards are available in all parts of the United States; and

WHEREAS, the art of medicine is frequently neglected in hospital residencies owing to over-emphasis on the science of medicine.

NOW THEREFORE BE IT RESOLVED, that the House of Delegates of the American Medical Association request the Advisory Board for Medical Specialties and the several American specialty boards to review and reconsider their policies in relation to general practice, residencies, and preceptorships in accordance with the foregoing statements.

Upon *motion* by Dr. Hinson for the Resolutions Committee, *seconded* by J. B. Hollis, M.D., Mangum, this Resolution was *approved*.

Resolution
Rh Factor

WHEREAS, the House of Delegates of the Oklahoma State Medical Association did, in 1945 and 1946 ap-

PROLONGED *Barrier Action*



1—Precoitus. Effective occlusion of cervical os by "RAMSES" Vaginal Jelly.

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

2—One hour postcoitus. Barrier action maintained by film of jelly.



3—Four hours postcoitus. Uterine os remains occluded.

4—Ten hours postcoitus. Occlusion still manifest—barring the passage of sperm.

The direct-color photographs shown above establish the prolonged barrier action of "RAMSES"* Vaginal Jelly. For photographic purposes, the jelly, which has a transparent clarity, was stained with a nonspermatocidal concentration of methylene blue.

In addition to the barrier action provided by its exclusive gum base "RAMSES" Vaginal Jelly immobilizes sperm rapidly.

Tests by an accredited independent laboratory, supported by clinical work of an outstanding research organization, confirm the lack of irritation and toxicity under continuous use. For dependability in spermatocidal jelly specify

Ramses VAGINAL JELLY

TRADEMARK REG. U.S. PAT. OFF.

Active ingredients: Dodecaethyleneglycol monolaurate 5%; Boric Acid 1%; Alcohol 5%.

gynecological division **JULIUS SCHMID, INC.**

quality first since 1883

423 West 55th St., New York 19, N. Y.

*The word "RAMSES" is a registered trademark of Julius Schmid, Inc.

parently adopt a report of the Maternity and Infancy Committee wherein the Committee recommended that the State Health Department do statewide Rh Factor typing, and

WHEREAS, the Oklahoma Association of Pathology desires to register a complaint of this type of work because it does not fall in the field of preventive medicine,

NOW THEREFORE BE IT RESOLVED, that the House of Delegates of the Oklahoma State Medical Association rescind the previous endorsement of this procedure and recommend that a joint meeting of the Board of Health, the Council of the Oklahoma State Medical Association, and the Oklahoma Association of Pathologists to further discuss this question.

Upon *motion* by Dr. Hinson for the Resolutions Committee, *seconded* by J. G. Edwards, M.D., Okmulgee, this Resolution was *approved.*

(The next order of business was the report of the Committee on Amendments to the Constitution and By-Laws. Publication will be deferred to a later issue of the Journal. The official transcript proceeds as follows.)

By this time the Council had returned and the Speaker declared that it was the appointed time for election of officers. He called for nominations from the floor:

The first to be recognized was W. S. Larrabee, M.D., Tulsa, who nominated C. E. Northcutt, M.D., Ponca City, for *President-Elect.*

It was *moved* by Ned Burleson, M.D., Prague, *seconded* by R. Q. Goodwin, M.D., Oklahoma City, that the nominations cease and Dr. Northcutt be elected by *acclamation.* The motion *carried.*

Dr. Northcutt was called to the Speaker's stand and said, in part: "I humbly accept this great honor. I have enjoyed serving as Councilor for the Third District and as a member of your Public Policy Committee. I am proud of this opportunity to further serve my profession and I assure you that I will no my very best. I thank you again for this honor."

The Speaker then called for nominations for *Vice-President.* He recognized Finis Ewing, M.D., Muskogee.

Dr. Ewing *nominated* Shade Neely, M.D., Muskogee, the nomination was *seconded* by J. W. Edwards, M.D., Okmulgee. Upon *motion* by A. R. Sugg, M.D., Ada, *seconded* by Philip Risser, M.D., Blackwell, and *carried,* the nominations were closed and Dr. Neely was elected by *acclamation.*

The Speaker then called for nominations for *Secretary-Treasurer* and again recognized Finis Ewing, M.D., Muskogee.

Dr. Ewing *nominated* for re-election Lewis J. Moorman, M.D., Oklahoma City, the nomination was *seconded* by R. Q. Goodwin, M.D., Oklahoma City. Upon *motion* by Philip Risser, M.D., Blackwell, *seconded* by Roy Emanuel, M.D., Chickasha, and *carried* the nominations were closed and Dr. Moorman was re-elected by *acclamation.*

The Speaker then called for nomination for Delegate to the A.M.A., stating that the term of C. R. Rountree, M.D., Oklahoma City, had expired. He recognized John F. Burton, M.D., Oklahoma City.

Dr. Burton *nominated* for re-election C. R. Rountree, M.D., Oklahoma City, and upon *motion* by W. S. Larrabee, M.D., Tulsa, *seconded* by R. Q. Goodwin, M.D., Oklahoma City, and *carried,* the nominations were closed and Dr. Rountree was re-elected by *acclamation.*

The Speaker then called for nominations for Alternate Delegate to the A.M.A., the position having been held by James D. Osborn, M.D., Frederick, deceased. He recognized Louis H. Ritzhaupt, M.D., Guthrie.

Dr. Ritzhaupt *nominated* A. R. Sugg, M.D., Ada, for Alternate Delegate, and upon *motion* by Philip Risser, M.D., Blackwell, *seconded* by Roy Emanuel, M.D., Chickasha, and *carried,* the nominations were closed and Dr. Sugg was elected by *acclamation.*

The next office for election was that of Councilor for District No. 1. In announcing the election of Councilors, the Speaker reminded the House of the motion passed in the last House of Delegates to elect Vice Councilors.

William Lafon, M.D., Waynoka, was recognized and *nominated* O. E. Templin, M.D., Alva, as Councilor and O. C. Newman, M.D., Shattuck, as Vice-Councilor for District No. 1. Upon *motion* by L. C. McHenry, M.D., Oklahoma City, *seconded* by Lee K. Emenhiser, M.D., Oklahoma City, the nominations were closed and Drs. Templin and Newman were elected by *acclamation.*

The Speaker then stated that a vacancy now existed in District No. 3 due to the election of C. E. Northcutt, M.D., Ponca City, Councilor to President-Elect.

Philip Risser, M.D., Blackwell, was recognized and *nominated* Bruce Hinson, M.D., Enid, as Councilor for District No. 3. F. Keith Oeschlager, M.D., Yale, was recognized and *nominated* R. W. Choice, M.D., Wakita, as Vice-Councilor. Upon *motion* by R. B. Gibson, M.D., Ponca City, *seconded* by L. G. Livingston, M.D., Cordell, the nominations were closed and Drs. Hinson and Choice were elected by *acclamation.*

In the election of Councilor and Vice-Councilor for District No. 4, upon *motion* by R. Q. Goodwin, M.D., Oklahoma City, *seconded* by L. S. Larrabee, M.D., Tulsa, Carroll Pounders, M.D., Oklahoma City, was nominated for Councilor and Joe Phelps, M.D., El Reno, for Vice-Councilor. The nominations were declared closed and Drs. Pounders and Phelps were elected by *acclamation.*

In the election for Vice-Councilor for District No. 5, F. W. Boadway, M.D., Ardmore, *nominated* J. Hobson Veazey, M.D., Ardmore, and upon *motion* by A. R. Sugg, M.D., Ada, *seconded* by Roy Emanuel, M.D., Chickasha, the nominations were closed and Dr. Veazey was elected by *acclamation.*

In the election for Vice-Councilor for District No. 6, John Perry, M.D., Tulsa, *nominated* Ralph Rucker, M.D., Bartlesville, upon *motion* by John F. Burton, M.D., Oklahoma City, *seconded* by W. A. Showman, M.D., Tulsa, the nominations were closed and Dr. Rucker was elected by *acclamation.*

In the election of Council and Vice-Councilor for District No. 7, A. R. Sugg, M.D., Ada, *nominated* Clinton Gallaher, M.D., Shawnee, for Councilor and Ned Burleson, M.D., Prague, for Vice-Councilor. Upon *motion* by W. W. Stark, M.D., Muskogee, *seconded* by F. W. Boadway, M.D., Ardmore, the nominations ceased and Drs. Gallaher and Burleson were elected by *acclamation.*

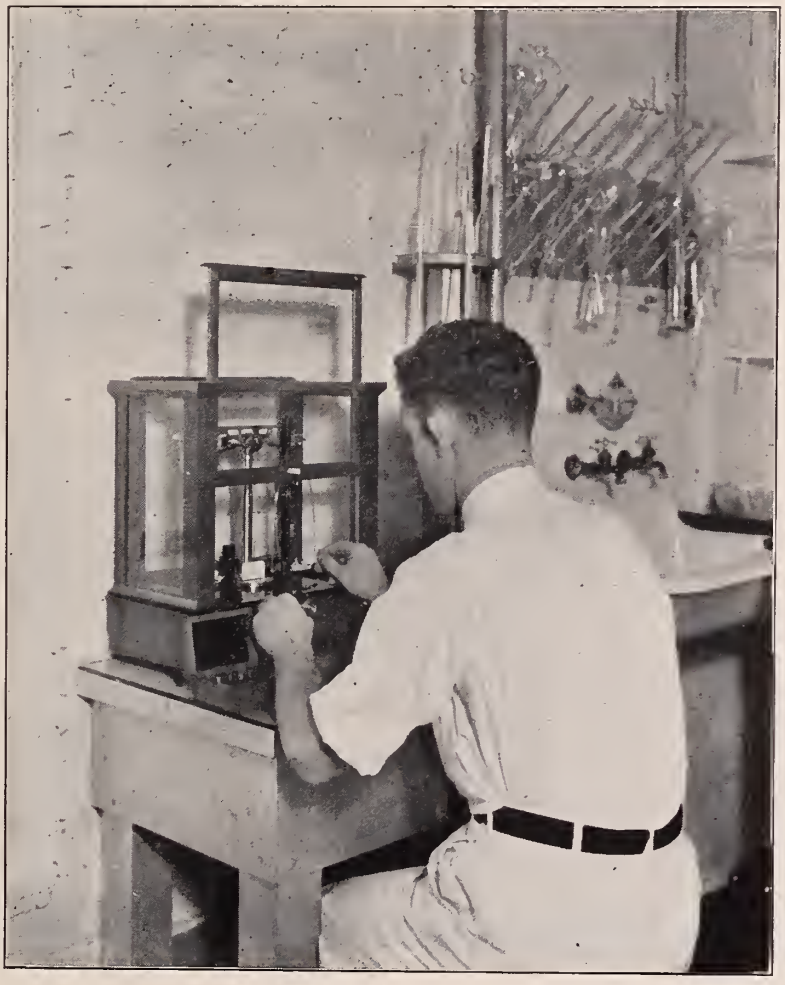
In the election for Vice-Councilor of District No. 8, J. G. Edwards, M.D., Okmulgee, *nominated* W. Jackson Sayles, M.D., Miami. Upon *motion* by W. W. Stark, M.D., Muskogee, *seconded* by Philip Risser, M.D., Blackwell, the nominations ceased and Dr. Sayles was elected by *acclamation.*

In the election for Vice-Councilor of District No. 9, F. P. Baker, M.D., Talihina, *nominated* E. H. Shuller, M. D., McAlester, and upon *motion* by A. R. Sugg, M.D., Ada, *seconded* by W. A. Howard, M.D., Chelsea, the nominations ceased and Dr. Shuller was elected by *acclamation.*

In the election of Councilor and Vice-Councilor for District No. 10, O. R. Gregg, M.D., Hugo, *nominated* W. K. Haynie, M.D., Durant, for Councilor and W. W. Cotton, M.D., Atoka, for Vice-Councilor. Upon *motion* by A. R. Sugg, M.D., Ada, *seconded* by Sam McKeel, M.D., Ada, Drs. Haynie and Cotton were elected by *acclamation.*

After the election of officers the Speaker called upon

There is no substitute for ACCURACY in manufacturing and standardizing PHARMACEUTICALS



We Have Supplied The Profession With *Ethical Products* For More Than 46 Years.

"We Appreciate Your Preference"

FIRST TEXAS CHEMICAL MFG. CO.

Dallas, Texas

L. C. Kuyrkendall, M.D., McAlester, President, for a report of the Council as to the amount of the increase in dues.

Dr. Kuyrkendall stated: "The Council, in special session this evening, has made the recommendation that the dues of the Association for 1948 be raised $20.00 per year, making a total of $42.00 per year."

Motion: Philip Risser, M.D., Blackwell:

> I move that we adopt the recommendation of the Council as to the raise in dues to $42.00 per year and approve the Council Report as a whole.

Seconded: W. S. Larrabee, M.D., Tulsa.

Motion carried.

Going on record as opposing the above motion were: C. M. Hodgson, M.D., Kingfisher, and John Morey, M.D., Ada.

The Speaker then recognized Clinton Gallaher, M.D., Shawnee, Secretary of the State Board of Medical Examiners who gave the following report.

State Board of Medical Examiners

The duties of the State Board of Medical Examiners are:

1. The Examination and licensure of physicians and surgeons and the licensing by reciprocity of physicians and surgeons from other states provided they meet the qualifications prescribed by our statutes and the rules of this Board.
2. The issuing of an annual certificate of registration to each medical doctor practicing in Oklahoma.
3. The enforcement of the provisions of the Medical Practice Act of Oklahoma.

In regard to this duty, I would like to enlarge on the duties prescribed and the authority given the State Board of Medical Examiners for the enforcement of the Medical Practice Act and the Annual Re-Registration Act.

Any medical doctor violating the provisions of these two acts is liable to the revocation of his license to practice in Oklahoma by this Board, after charges have been filed with this Board and the doctor charged has been given statutory notice and an opportunity to appear before this Board and present his side of the case. If, after hearing the evidence, the Board is of the opinion that the doctor charged has been guilty of the violation of the Medical Practice Act or the Annual Re-Registration Act, the Board may either revoke or suspend such doctor's license for a definite period of time not to exceed five years, or they may place such doctor on probation for a period of time not less than one year nor more than five years.

The violation of the provisions of the Medical Practice Act by persons who are not medical doctors must be prosecuted by the County Attorney of the respective county wherein such violation occurred. The Legislature in passing the Annual Re-Registration Act provided for the employment of an attorney to assist authorized state and county officers in prosecuting or restraining violations of these acts.

If any doctor is aware of a violation of the Medical Practice Act or the Annual Re-Registration Act by any medical doctor, the State Board of Medical Examiners have forms to be followed in filing a complaint with this Board, upon the filling of which complaint, signed by the complaining party, the Board will proceed with the hearing to determine whether or not there has been a violation of these acts that would warrant the Board in revoking or suspending such medical doctor's license.

If any doctor is aware of violations of these acts by parties other than medical doctors and has substantial evidence and information as to such violation, he should write to the office of the State Board of Medical Examiners, 813 Braniff Building, Oklahoma City, Oklahoma, giving the Board any and all information relative to such violations. The Board's attorney, B. E. Harkey, will then assist in securing evidence and presenting the case to the County Attorney of the county wherein the violation occurred. You must remember that it is your local County Attorney who must prosecute the case and you must also remember that the evidence of the violation must be sufficient for a prosecution in the courts of your county. It will not be necessary for you to sign the information filed with the County Attorney, however, it will be necessary for you to assist the Board's attorney in getting the cooperation of your County Attorney in prosecuting such violators. I hope that you will understand that it is not possible for the State Board of Medical Examiners or their attorney to investigate all complaints in the State. Therefore, I suggest that unless you feel that you have sufficient information and evidence or that sufficient information can be obtained to warrant prosecution by the County Attorney, that you do not request an investigation by the Board.

The members of the Board would appreciate it if you would not take these matters up with them individually or come to them with oral complaints. If you think the violation is such that it would warrant an investigation by this Board, then we believe that you will take the time to sit down and write a letter signed by you to the State Board of Medical Examiners giving us substantial information about such violation.

I wish that you would remember that so long as osteopathic physicians and osteopathic physicians and surgeons or chiropractors are confining their practice to their respective fields they are not in violation of the Medical Practice Act.

I wish to assure you that the Board is anxious to prevent any violations of the Medical Practice Act and we will exert every effort to do so, but we definitely will be obliged to have the assistance of the members of our profession in this state. We ask that you cooperate with us, first, by not requiring time and investigation by the Board into matters where it is not warranted, and, second, in assisting us in every way that you possibly can in the prosecution of violators of our Medical Practice Act.

General discussion followed Dr. Gallaher's report.

Upon *motion* by Philip Risser, *seconded* by Roy Emanuel, M.D., Chickasha, the meeting was *adjourned.*

George H. Garrison, M.D.
Speaker of the House

Reported by: Jane Tucker.



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HAVE YOU HEARD

Dr. Louis A. Ritzhaupt, who is President of the American Poultry Growers Association, went to Washington, D. C., May 1 to participate in the Eighth World Poultry Congress.

Dr. Harlan K. Sowell, 502 W. Broadway, Britton, Oklahoma, is now associated with *Dr. L. E. Crick* in Britton. Dr. Sowell left the U. S. Naval service April 13, 1947, with the rank of full lieutenant, having served in the Pacific aboard a L. S. M. with Group 36.

April 14 marked the 50-year anniversary of the date that *Dr. J. B. Clark* of Coalgate was graduated from Tulane University at New Orleans, La. He has practiced continuously in Coalgate since locating there on July 12, 1902. Dr. Clark was a member of the Indian Territory Medical Association and a delegate from the Indian Territory Medical Society at Sulphur when Oklahoma became a state and the Oklahoma Territory and Indian Territory Medical oScieties united to form the Oklahoma State Medical Association.

Dr. John A. McIntyre has recently opened offices in Enid, Oklahoma, in the Broadway Tower. Dr. McIntyre, a graduate from OU Medical School, class of '43, is a native of Tryon, Oklahoma. He served with the Navy during the recent war and recently completed residency at St. Luke's Methodist Hospital, Cedar Rapids, Iowa.

Also a graduate of OU Medical School, *Dr. Gene Arrendell* has begun medical practice in Ponca City in association with his father *Dr. C. W. Arrendell* and *Dr. E. C. Yeary* in the Community Building. The younger Dr. Arrendell was formerly resident surgeon at Western Oklahoma State Hospital in Clinton.

It's a boy at the home of *Dr. Bob McIntosh*, Tahlequah. The name of the new arrival is Charles Langley McIntosh.

Dr. J. P. Bell, OU Medical School graduate, has opened offices in the Steiger Building, Midwest City. He recently completed internship at University Hospital, Oklahoma City.

Dr. H. B. Witten has sold the Witten Hospital and Clinic in Harrah and will accept a position as psychiatrist at the Central State Hospital, Norman.

The permanent citation for his Bronze Star Medal was recently received by *Dr. Granville I. Walker, Jr.*, of Hominy, now on inactive duty as a lieutenant in the Navy medical corps. The citation was earned "for heroic achievement as medical officer on the USS *Bache* during operations against enemy Japanese forces at Okinawa from April 1 to May 13, 1945. After numerous casualties had been sustained as a result of enemy action, Lt. Walker successfully administered medical aid to the wounded, despite limited facilities, thereby contributing to the saving of many lives. His courage and devotion to duty throughout were in keeping with the highest traditions of the United States Naval service."

MEDICAL SCHOOL

CALENDAR — JUNE, 1947

SURGICAL PATHOLOGIC CONFERENCES — Each Tuesday 12:00 Noon to 1:00 P.M.

MEDICAL CONFERENCES — Each Wednesday, 9:00 A.M. to 10:00 A.M.

CLINICAL PATHOLOGIC CONFERENCES — Each Thursday 12:00 Noon to 1:00 P.M.

TUMOR CLINICS — First and Third Tuesdays (June 3 and 17) 8:00 A.M. to 9:00 A.M.

UROLOGIC-PATHOLOGIC CONFERENCE—Second Tuesday (June 10) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING — Second Friday (June 13) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE — Fourth Monday (June 23) 6:45 P.M. to 7:30 P.M.

Captain Maurice C. Gephardt (Med '43), formerly with the Army Medical Corps Typhus Commission, is now stationed in Japan with the Public Health and Welfare Section, GHQ-SCAP, doing research on typhus fever.

Dr. Jack Haldeman (Med '37) is now with the Hospital Division of the U. S. Public Health Service as Consultant to the States in development of the Hospital Survey and Construction Program, established by the Hill-Burton Bill.

Dr. C. Samuel Beaty (Med '35) and Dr. L. G. Johnson (Med '35) have recently started serving residencies in Anesthesia at the University Hospitals.

Dr. Paul B. Chapman (Med '46) was a visitor at the Medical School, May 3. He just completed his internship at Evangelical Hospital, Detroit, Michigan, and is awaiting military duty.

Dr. Carl Bowie (Med '46) and Dr. James T. Boggs (Med '46) have recently completed their internships at Wesley Hospital.

Dr. Elnora Miller (Med '46) has recently completed her internship and has entered practice at Tulsa, Oklahoma.

Dr. John F. Hackler, Professor, Preventive Medicine and Public Health, participated in a symposium on Recruitment and Training of Public Health Personnel at the meeting of the Southern Branch of the American Public Health Association in Memphis, Tennessee, April 22, 1947.

Dr. Donald B. McMullen, Associate Professor of Preventive Medicine and Public Health, has been granted a two-year leave of absence from the School of Medicine. He will be the Senior Parasitologist with the Armed Forces in Japan, and will be attached to the 406th Medical Geueral Laboratory in Tokyo as head of the Department of Parasitology. It has been indicated that a great deal of time can be spent in research on the various parasitic diseases of the Far East. The remainder

(Continued on Page 272)

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OBITUARIES

Galvin Luther Johnson, M.D.
1879-1947

Galvin Luther Johnson, M.D., of Pauls Valley, died May 11, 1947. Death was attributed to coronary occlusion. Born September 30, 1879, Dr. Johnson received his medical education in Tennessee, being graduated in 1903. He was licensed to practice medicine in Oklahoma in 1909 and for 37 years served the Garvin County area as a pioneer physician, founding one of the state's first hospitals at Pauls Valley. Dr. Johnson was appointed to the State Board of Medical Examiners early in 1947 by Governor Roy J. Turner. Following is a resolution adopted by the Garvin County Medical Society, of which Dr. Johnson was a member.

Resolution

TO THE GARVIN COUNTY MEDICAL SOCIETY:

Whereas it has pleased the Supreme Physician to call from his earthly labors our beloved friend and co-laborer, Dr. G. L. Johnson, of Pauls Valley, Oklahoma, who was a member and constant attendant upon our organization's conventions for many years, yielding the profession of which he was an honored member his unstinted loyalty and untiring effort, and,

Whereas, his wife and children have lost a kind and loving husband and father, and Garvin County an outstanding member of the medical profession, and the profession itself has suffered an irreparable loss in the death of Dr. Johnson:

Therefore, be it resolved that the Garvin County Medical Society hereby tenders to the bereaved family our deep and abiding sympathy in this their hour of great bereavement, and express it as the sense of this Body that in the loss of Dr. G. L. Johnson the medical profession of this County has suffered a distinct and irreparable loss, and the community in which he lived a loyal, upright, and honorable citizen, as well as an eminent physician and surgeon;

Be it further resolved that a copy of this resolution be sent to the family of the said Dr. G. L. Johnson, at Pauls Valley, Oklahoma, and that a copy be furnished the local newspapers and the Journal of the Oklahoma Medical Association, of which the said Dr. G. L. Johnson was an honored and beloved member for many years past.

Respectfully submitted,
John R. Callaway, Secretary-Treasurer,
Garvin County Medical Society

The above resolution was unanimously adopted by the Garvin County Medical Society on this the 14th day of May, 1947.

George Reed Tabor, M.D.
1864-1947

George Reed Tabor, M.D., formerly of Oklahoma City, died May 19, 1947, at his ranch near Tishomingo following a heart attack. Born August 30, 1864, in Lockhart, Texas, he attended Bryan, Texas, preparatory schools and Texas A & M College, and was graduated from Louisville Medical College in 1888. Dr. Bryan was Texas State Health Officer from 1901 to 1907, and author of early sanitation and narcotic laws in that state. At one time he was surgeon general of the Texas National Guard, and served as a medical reserve corps officer on the Mexican border from 1916 to 1918. He studied yellow fever within Cuba and Vera Cruz in 1913 and 1914.

From 1908 to 1913 Dr. Tabor was president of the American Anti-Tuberculosis Society in New York City, and also served as president of the Brazos Valley Medical Association for 11 years. He was a past president of the Oklahoma Sons of the American Revolution, and past commander of the Sons of the Confederate Veterans. He was a member of the Baptist Church.

In 1944, Dr. Tabor was elected to Honorary Membership in the Oklahoma State Medical Association, and a letter of recognition of the honor is in the files of the State Office, reading in part as follows: "I am in recent receipt of a card announcing a distinguished service Honorary Membership in the Oklahoma State Medical Association, and wish to express my sincere gratitude for such recognition and honor. I value it more highly than I can state and will always cherish it above any distinction I possess and will try to merit the confidence imposed. Rest assured that I will never tarnish my profession by any improper act. I have about reached the end of my row, having practiced medicine fifty-eight years in Texas, foreign countries, and for twenty-six years in Oklahoma. I sincerely thank you."

Survivors include his wife, Mrs. Flora Tabor; two sons, Cmdr. Milton J. Tabor, USN, Clearfield, Utah, and George Reed Tabor, Jr., San Francisco; and one sister, Mrs. Fred Malley, San Antonio, Texas.

MEDICAL SCHOOL NOTES

(Continued from Page 270)

of the time will be devoted to assigning and supervising various projects, and the training of personnel. Official orders have not been received, but information indicates that Dr. McMullen will leave Oklahoma City on May 25 and go to Japan by air.

Dr. John F. Hackler, Professor of Preventive Medicine and Public Health, has been appointed to the American Public Health Association, Health Officers Section committee on Establishment of a Specialty Board in Public Health. He participated in a discussion of the topic at the National Conference of State Directors of Local Health Service in Topeka, Kansas, on April 11, and attended a committee meeting in Chicago on April 12, 1947.

Word has been received that Dr. Paul Hanson (Med '36) and Dr. Orcina Hanson (Med '28) are now practicing in Los Angeles, California. Also Dr. Bert Cotton (Med '37) is specializing in chest surgery in Los Angeles, California.



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DR. PERRY C. TALKINGTON } Medical Directors
DR. CHAS. F. BULLION, Associate Psychiatrist
DR. JACK C. COOPER, Resident Psychiatrist

MRS. NELLE COOPER R.N., Superintendent of Nurses
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OFFICERS OF COUNTY SOCIETIES, 1947

COUNTY	PRESIDENT	SECRETARY	MEETING TIME
Alfalfa	L. R. Kirby, Cherokee	L. T. Lancaster, Cherokee	Last Tues. each Second Month
Atoka-Bryan-Coal-Johnston	J. S. Fulton, Atoka	A. T. Baker, Durant	
Beckham	O. C. Standifer, Elk City	J. E. Levick, Elk City	Second Tuesday
Blaine	Fred Perry, Okeene	Virginia Curtin, Watonga	Third Thursday
Caddo	George W. Conover, Jr., Anadarko	Edward T. Cook, Jr., Anadarko	Third Thursday
Canadian	G. L. Goodman, Yukon	Jack W. Myers, El Reno	Subject to Call
Carter	J. M. Gordon, Ardmore	C. D. Cunningham, Ardmore	Second Tuesday
Cherokee	P. H. Medearis, Tahlequah	R. K. McIntosh, Jr., Tahlequah	First Tuesday
Choctaw-McCurtain-Pushmataha	Reed Wolfe, Hugo	Fred D. Switzer, Hugo	
Cleveland	Orville Woodson, Norman	T. A. Ragan, Norman	Thursday nights
Comanche	Leslie T. Hamm, Lawton	Byron W. Aycock, Lawton	Third Tuesday
Cotton	G. W. Baker, Walters	Mollie Seism, Walters	Third Friday
Craig	P. L. Hayes, Vinita	J. M. McMillan, Vinita	
Creek	O. H. Cowart, Bristow	F. H. Sisler, Jr., Bristow	Second Tuesday
Custer	Willard H. Smith, Clinton	D. W. McCauley, Clinton	Third Thursday
Garfield	Francis M. Duffy, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	Thomas F. Gross, Lindsay	John R. Callaway, Pauls Valley	Wednesday before Third Thursday
Grady	R. R. Coates, Chickasha	Wesley W. Davis, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	F. P. Robinson, Pond Creek	
Greer	Dwight D. Pierson, Mangum	J. B. Hollis, Mangum	
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis	First Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams McCurtain	
Hughes	Clyde Kernek, Holdenville	H. V. Schaff, Holdenville	First Friday
Jackson	E. W. Mabry, Altus	J. P. Irby, Altus	Last Monday
Jefferson	J. A. Dillard, Waurika	O. J. Hagg, Waurika	Second Monday
Kay-Noble	E. C. Mohler, Ponca City	Edwin Yeary, Ponca City	Second Thursday
Kingfisher	John R. Taylor, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	J. Wm. Finch, Hobart	R. F. Shriner, Jr., Hobart	
LeFlore	John H. Harvey, Heavener	Rush L. Wright, Poteau	
Lincoln	J. S. Rollins, Prague	Ned Burleson, Prague	First Wednesday
Logan	James Petty, Guthrie	J. E. Souter, Guthrie	Last Tuesday
Mayes	E. H. Werling, Pryor	Paul B. Cameron, Pryor	
McClain	I. N. Kolb, Blanchard	W. C. McCurdy, Jr., Purcell	
McIntosh	F. R. First, Sr., Checotah	W. A. Tolleson, Eufaula	Third Thursday
Muskogee-Sequoyah-Wagoner	W. P. Fite, Muskogee	William N. Weaver, Muskogee	First Tuesday
Northwestern	Myron England, Woodward	C. W. Tedrowe, Woodward	Second Thursday Even Months
Okfuskee	L. J. Spickard, Okemah	M. L. Whitney, Okemah	
Oklahoma	F. Redding Hood, Oklahoma City	George E. Kimball, Oklahoma City	Fourth Tuesday
Okmulgee	John Cotteral, Henryetta	C. E. Smith, Henryetta	Fourth Tuesday
Osage	R. O. Smith, Hominy	Gayfree Ellison Pawhuska	Second Monday
Ottawa	B. Wright Shelton, Miami	W. Jackson Sayles, Miami	Third Monday
Payne-Pawnee	C. H. Haddox, Pawnee	C. W. Moore, Stillwater	Second Thursday
Pittsburg	Homer C. Wheeler, McAlester	Edward D. Greenberger, McAlester	Third Friday
Pontotoc-Murray	E. D. Padberg, Ada	Ollie McBride, Ada	First Wednesday
Pottawatomie	Charles F. Paramore, Shawnee	Clinton Gallaher, Shawnee	First and Third Saturday
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	
Seminole	Claude B. Knight, Wewoka	Mack I. Shanholtz, Wewoka	
Stephens	E. H. Lindley, Duncan	E. C. Lindley, Duncan	Third Wednesday
Texas	Daniel S. Lee, Guymon	E. L. Buford, Guymon	Third Wednesday
Tillman	G. A. Tallant, Frederick	O. G. Bacon, Frederick	
Tulsa	E. O. Johnson, Tulsa	John E. McDonald, Tulsa	Second and Fourth Monday
Washington Nowata	Thomas Wells, Bartlesville	L. B. Word, Bartlesville	
Washita	A. H. Bungardt, Cordell	Aubrey E. Stowers, Sentinel	Second Wednesday
Woods	C. A. Traverse, Alva	O. E. Templin, Alva	Last Tuesday Odd Months

THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

WHO'S WHO

The University of Oklahoma School of Medicine recently sent seventy graduates into the field of service. A record of what was on the minds of these young graduates when they received their diplomas would make interesting reading, but it would not reveal the future. The Dean and their professors must await the further evolution of character and career.

The members of the Committee on Admissions have a tough task. They cannot look into a youth's face and read the future. Neither does the aptitude test discover the latent spark in the timid soul. Often dreams of accomplishment are carefully concealed and latent talents remain undiscovered.

The medical students' teachers with four years of intimate contact find appraisal difficult. Even though they make discoveries which seem to warrant prophecies, often their judgment is in error. Two hundred years ago Oliver Goldsmith and Edmund Burke were fellow students at Trinity College. Goldsmith was a "sizar," performing menial tasks in return for board and instruction. Even from the wisest of his teachers there was no echo of his real merit. At Elphinstone, Athlone and Edgeworthstone he had been considered "heavy, dull, and obtuse." But in spite of this scholastic record he was destined to sit with Burke at the club tables in London and to attract to his own table the great Dr. Samuel Johnson.

While he worked his way through school without distinction, some undiscovered force, concealed by his obtuse personality, was working toward his immortal achievements. When he died Burke "burst into tears." Johnson wrote "he was a very great man," and Reynolds "put aside painting for the day."

Oklahoma's present needs in the field of medicine including research offer unusual opportunities for the young medical graduate. Patiently teachers and friends shall await the verdict. Only time can tell Who's Who. Oklahomans expect the members of the medical class of 1947 to glorify their Alma Mater and to cast a mellow light over Oklahoma medicine. William Osler has said, "Life is a straight, plain business, and the way is clear, blazed for you by generations of strong men, into whose labors you enter and whose ideals must be your inspiration. In my mind's eye I can see you twenty years hence — resolute-eyed, broad-headed, smooth-faced men who are in the world to make a success of life. . . ." This is what your young university and your relatively new state needs. It's to be hoped that the twenty-year record will bring a high average, and that each member of the class will win a high place in his profession, thus making it difficult to determine Who's Who.

THE GENERAL PRACTITIONER

In a recent issue of the A. M. A. Secretary General's circular letter we learned that "Drs. Roscoe L. Sensenich, Walter L. Bierring, and Morris Fishbein will take part in the symposium on the subject of the general practitioner to be given during the Illinois State Medical Association's meeting in Chicago, May 12 to 14." In the succeeding paragraph, the recipients of the letter are requested to "read 'General Practice in a Large Hospital' by Dr. M. H. Miller, Detroit, in the May 3 issue of JAMA for a report 'of eight years' experience in the operation of such a section."

These references supplemented by the obvious interest in general practice manifested at the Atlantic City meeting warn the unanchored young doctor against the mad rush toward specialization. Even medicine, in spite of its level gaze, moves in circles. After 100 years we realize we have gone too far.

The young physician should recognize the trend and profit by the alarm so manifest at the Centennial Meeting.

AN OKLAHOMAN FIRST

Quiet, gentle, modest, reticent, observant, wise Sister M. Beatrice superintends the X-Ray Department at St. Anthony Hospital. At the recent meeting of the American Society of X-Ray Technicians in Buffalo, she read a paper entitled "The Rays of Time." That Sister Beatrice is eminently qualified to discuss this subject is attested by the fact that she was the first to receive a certificate from the American Registry of X-Ray Technicians. She graduated from the Nurses Training School at St. Anthony in 1917. She took charge of the X-Ray Department in 1920 and took the examination for her certificate as x-ray technician in November, 1922.

Though Sister Beatrice lives and works at St. Anthony Hospital and has been designated "Dean of X-Ray Technicians," she belongs to the state of Oklahoma.

SWIMMING POOLS

We are in midsummer and the otolaryngologists should have a vacation. Though not being born aquatic, we behave like waterouzels and suffer like human beings. The ear, nose, and throat specialists are consulted between dives and after duckings and often hospital beds are required for the care of the more serious infections and occasionally the undertaker and the gravedigger profit by our folly.

We should remember that in the process of evolution man ultimately came down from the trees, not up from the seas, and that our children are not provided with the protective mechanisms which Nature has given to sea lions and waterfowl. When we overindulge their acquatic propensities we are laying them liable to evil consequences. They should be taught that biologically they are landlubbers and not designed for submarine existence.

Not only should they be taught not to spend all their waking hours in the water, but not to go in when they have a bad cold or when they are overheated or unduly fatigued. Pediatricians and the few extant family physicians should bestir themselves in behalf of their dry land patrons whose children insist upon going aquatic.

DOCTORS GIVE

This morning (June 18, 1947) the Daily Oklahoman carried the following headlines, "Doctors' Drive Nets $256,145." It will be embarrassing if the physicians of the state do not subscribe the designated one million. It has been heralded abroad that we are doing something which has never been done before in the history of the world. This is the first time that all the doctors of a state or community have united for the purpose of launching a money-raising campaign for research in which everybody is invited to participate. Usually campaigns to raise money for research revolve around an established research laboratory or a great scientist. This campaign is based upon an idea, a composite conception originating in the minds of the medical profession. It must be supported.

A few weeks ago the writer sat at a banquet table in a distant city and listened to an animated conversation about the Oklahoma Foundation for Medical Research. The leading participants were not Oklahomans, but what they said would make any true Oklahoman proud of his state and proud of the medical profession for initiating and supporting such a humanitarian movement.

But in the last analysis the Foundation may well be considered as an asset for the medical profession. The physician who is not interested in the general advancement of human welfare may well consider his gift as an investment.

As this goes to press the President vetoes the Tax Reduction Bill. It's a good time to give, especially when the money given will be spent at home.

SCIENTIFIC ARTICLES

FIVE HUNDRED FIFTY-SEVEN CASE HISTORIES OF CERVICAL DISEASE, 1944-1945*

KENNETH J. WILSON, M.D. AND CHARLES HUGH WILSON, M.D.
OKLAHOMA CITY, OKLAHOMA

The time allotted for this narration affords only cursory examination of these cases. The detail is not sufficient to portray a complete over-all picture but does emphasize some observations made in the course of their care. Since cervical disease is the most common affliction of females, it is our opinion that far too little significance is being attached to it in relationship to other pelvic pathology. In our experience, 80 per cent of gynecologic conditions arise in the cervix and are amenable to therapy conducted in the office. In perusing this data, it is noteworthy that approximately one-fourth of these patients had been subjected to one or more laparotomies resulting in the loss of the following organs: one or both tubes, 23; one ovary, 28; both ovaries, 27; uterus, 21; and all reproductive organs in three. None of this surgery gave relief of symptoms. Sixty-three had had from one to fifty cautery treatments, with amelioration of symptoms in some instances, but inadequate for cure.

Tabulation of symptoms reveals that *backache* is the most common, being present in 255. (See Figure I, a, b, and c.) *Pelvic soreness*, subjective or elicited by palpation, in 215 (See Figure II, a and b.) *Bladder spmptoms*, intermittently or continuously, were recorded in 194. Granting that some of these urinary symptoms were due to primary infection of the urinary tract, particularly the urethra, they are still one of the prominent complaints. (See Figure III, a and b.) *Dyspareunia*, constantly or occasionally, was acknowledged in 170. Some of these were due to vaginitis, particularly those with trichomonas vaginalis. *Nervousness* was accentuated in 157, 11 of which were classified as psychiatric. Allowing for some that were due to other causes, this ratio is still high. (See Figure IV, a and b.) *Leucorrhea* was present in 306, but deducting 150 of these with demonstrable trichomonas infestation that could have accounted for the discharge relegates this symptom to lesser prominence. (See Figure V, a and b.) *Dysmenorrhea* was recounted in 138 instances and other menstrual anomalies in 151. (See Figure VI, a.) Additional common complaints were: *constipation*, 122; *headache*, 87; *feeling of decensus*, 63; *gastro-intestinal*, 43; *neuritis*, 35; *Loss of libido*, 27; *infertility*, 22; *arthritis*, five; and a few more remote symptoms. (See Figure VII, a and b.) The age variation of these patients ranged from 17 to 65 years, preponderantly in the child-bearing period. A striking revelation was their low production rate, averaging about two children to the parous patient.

Discussion of physical findings will be confined to the genitals, except to recite suspected incidence of appendiceal involvement that was present in 46, in addition to their cervical disease. Fourteen of these subsequently had the appendix removed by us and we learned of several others operated elsewhere. However, we are certain that fully half recovered without surgery, indicating that the basic pathology was pelvic. The presence of cervical disease was determined by inspection and palpation, with bacterial and biopsy differentiation in some. These cases were all the chronic type, occasionally with superimposed acute exacerbation. The majority presented varying degrees of injury and change in topography of cervix. In most instances inspection was sufficient to determine the presence of infection, but some diognoses were mode by eliciting tenderness on palpation of the uterus, when there was no other evidence of pathology. Occasionally, an atresia of the cervix, that may or may not have been due to endocervicitis, accounted for

*Presented before the Section on Ob and Gyn of the Oklahoma State Medical Association at the Annual Meeting, May 1, 1946.

uterine engorgement and tenderness. This is believed to be true because of the relief obtained with galvanic treatment. There was obvious hypertrophy of the cervix in 149 cases, attended by uterine hypertrophy in 81. Palpable uterine tenderness was elicited in 100. (See Figure VIII, a, b, and c.) Marked retroversion or retroposition was present in 79, several of which had had previous suspension operations. Decensus could be recognized in some, though it was always more of a subjective symptom. The incidence of other findings was: adnexitis, in varying degrees of severity, in 50; cystic ovary in 17; and acute salpingitis, encountered in two cases, was allowed to get well before treatment of the cervix. Known fibroids were found in nine. Cancer of the cervix, with laboratory confirmation, was recognized in three, two of which had had previous hysterectomy. (See Figure IX, a and b.) Fifty cases, in most instances with a diagnosis of cystic ovary or ovaries, had been advised to have abdominal operations.

Three hundred sixty-three patients in this series accepted the treatment advised. Electrocoagulation of the cervix was done in 219 cases. Electroconization, with supplementary coagulation, was chosen for 129. Twelve were given galvanic treatments and three operated by laparotomy. Simultaneous treatment of associated infections of the genito-urinary tract or systemic disease was given when indicated.

The follow-up of treated cases with whom we have been able to maintain contact reveals gratifying results in practically all instances. The relief of symptoms was often spectacular. It is noteworthy that all but four of the psychiatric cases made splendid adjustments. Young subjects with atresia and endocervicitis were all relieved by positive galvanism. Fecundation occurred in half of those seeking relief from sterility following these methods of treatment. All of the arthritic cases were completely relieved and the two known malignancies treated have shown no evidence of metastasis or recurrence. Cervical and uterine hyperthophy receded after cervical treatment, in varying lapses of time, depending upon the degree of pathology present. Several of these cases had previously been diagnosed as uterine fibroids and intrapelvic surgery had been advised.

Four cases of acute pelvic infection were encountered following cervical treatment and that about parallels the incidence in case records that had not been treated. All of these acute flare-ups were controlled within three or four days. Troublesome postoperative bleeding was a complication in one out of every 12 cases and was always controlled in the office. The three laparotomies reported were: removal of a large cystic ovary in a patient who had had oopherectomy on the other side six years previously for endometriosis; and removal of large bilateral cystic ovaries in a post menopausal patient. It is interesting that the two cases of cervical cancer who had previous hysterectomies for bleeding continued to bleed after those operations but have not apparently been cured by radical conization and coagulation.

It is our conviction that success of this therapy is contingent upon adequate application with prolonged observation to insure complete eradication of cervical disease and maintain patency of the cervical canal. Some will be cured within a few weeks, others require much more time, so that we have ar-

FIGURES I-VII

I—(a) LW — age 25 — 6 months post partum — backache constant since delivery.
(b) Unipolar electrocoagulation. Picture immediately after treatment.
(c) 6 months after treatment — backache relieved day of treatment.

II—(a) JS — age 37 — para 4 — nervous — bladder symptoms — burning discharge — low grade temperature — headache and backache — dyspareunia — pelvic soreness. Operated a year ago for repair of cervix and removal of uterus — no improvement — there is a large lacerated, infected cervix with slight bleeding. Radical conization and coagulation was done.
(b) 6 months later relief of all symptoms.

III—(a) VC — age 44 — no children — complains of aching in pelvis, back, hips, and bladder — menstrual pain and irregularity — constipation — very nervous — insomnia — 5 operations — appendectomy with peritonitis, ? date — 1922 right tubal pregnancy — 1926 left tube and ovary — 1944 hysterectomy — none of the symptoms except bleeding relieved. Twin cervical stumps coagulated.
(h) 6 months later — relief of all symptoms.

IV—(a) GD — age 36 — 1 child, 17 years of age — sterility — bearing down pelvic pain — nausea — bladder symptoms — menstrual irregularity for four years — almost constant lately — extreme nervousness — exploratory laparotomy 11 months previous. Unipolar electrocoagulation.
(b) 12 months following treatment — all symptoms relieved.

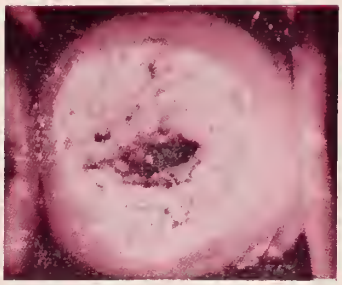
V—(a) ER — age 20 — married 18 months — leucorrhea several years — dyspareunia occasionally — cervical discharge — palpable uterine tenderness. Bipolar electrocoagulation.
(b) 3 months following treatment — all symptoms relieved.

VI—(a) EL — age 21 — unmarried — menstruation always irregular — 20 to 60 day cycle — 8 day flow — dysmenorrhea — backache — past 5 weeks constant flow. Unipolar electrocoagulation was done. 8 months after treatment all symptoms relieved.

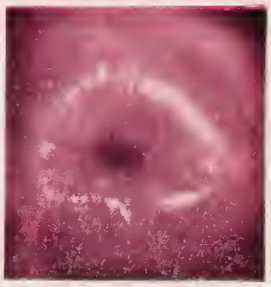
VII—(a) EL — age 28 — 1 child, 8 years of age — infertility — backache — pelvic soreness — leucorrhea — dysmenorrhea —7 day flow — dyspareunia — pelvic pain when sitting — arthritis — 6 months treatment for arthritis — no improvement — uterus and adnexa. Unipolar electrocoagulation. Arthritic symptoms relieved within a week. All symptoms within 5 months.
(b) 10 months after treatment.



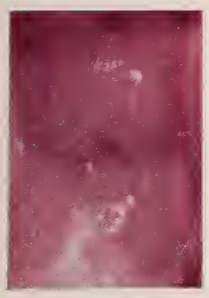
I (a)



I (b)



I (c)



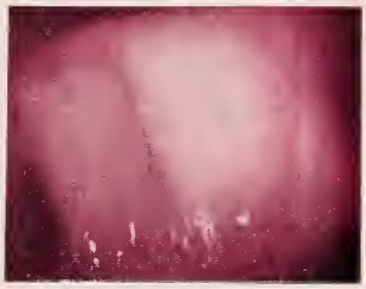
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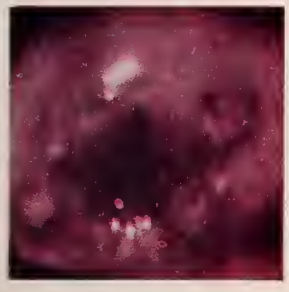
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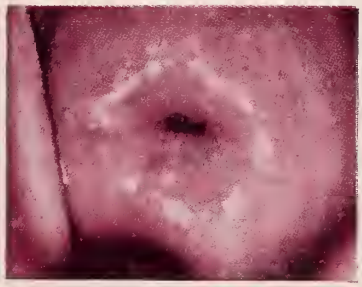
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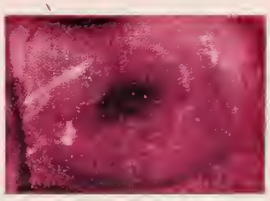
IV (a)



IV (b)



V (a)



V (b)



VI (a)



VII (a)



VII (b)

bitrarily adopted a 12-month period of follow-up in all cases. Ideally all cervical pathology is destroyed by the initial procedure. One must keep two pertinent principles in mind: first, that often repeated or prolonged thermal trauma is itself a form of irritation and may cause the same sequela as the disease; second, superficial treatment frequently only disguises the deep involvement of glands and completely obstructs whatever drainage may have been present, thus defeating its very objective. We condone conservatism, particularly in young individuals. Nevertheless, we are impressed with the futility of inadequate treatment as evidenced by the great number of patients in this series having had previous cautery treatments without elimination of the disease. (See Figure X, a and b, and Figure XI, a, b, and c.) Free drainage of the cervix and uterus has long been recognized as a pertinent factor in promoting normal genital functions. Therefore measures must be carried out for the establishment of continued patency of the cervical canal since some contraction is inevitable following any scarification of tissues. (See Figures XII, XIII, and XIV.)

Some type of anesthesia was desirable in all cases. In most instances topical application of cocaine was sufficient, although when there was extensive involvement or the patient was extremely nervous, intravenous sodium pentothal or low spinal was used. We wish to emphasize that greater familiarity with cervical disease seems indicated and that more experience with thermo-destruction of cervical pathologic processes will prevent a great deal of ill-advised pelvic surgery.

FIGURES VIII-XIV

VIII—(a) FS — age 52 — para 4 — menstruation 2 to 3 month cycle past 3 years — past 6 weeks constant bleeding — marked multiple cystic cervicitis with extensive laceration — enormous hypertrophy of both cervix fundus — sensitive — was advised to have hysterectomy for fibroid uterus.

(b) Radical conization and electrocoagulation — biopsy negative for malignancy.

(c) 13 months post operative, all symptoms relieved — hypertrophy receded — topography of cervix slightly altered but free from disease

IX—(a) GW — age 29 — para 3 — all the usual symptoms associated with cervical disease since the birth of her first child — 6 weeks ago she aborted and was curretted but continued to bleed — her physician took a biopsy of the cervix and that was reported malignant — there is extensive cervical disease and bleeding from the cervix. Radical conization and electrocoagulation.

(b) 2 years post operative — completely well.

X—(a) AD — age 19 — para 2 — backache — feeling of decensus — inadequate cautery treatment. Unipolar electrocoagulation was done.

(b) 10 months after treatment — all symptoms were relieved within 8 weeks.

XI—(a) VH — age 20 — para 2 — leucorrhea — backache — pelvic soreness — constipation — clotty menstruation.

(b) 6 months after coagulation — continued uterine tenderness and irregular menstruation — inadequate coagulation — additional coagulation.

(c) 6 months later — all symptoms relieved.

XII—(a) BH — usual pelvic symptoms — complete stenosis of the cervix following plastic surgery of the cervix.

XIII—(a) VW — marked usual pelvic symptoms of cervical disease — complete stenosis of cervix resulting from long standing infection — no treatment.

XIV—(a) SRH — severe pelvic symptoms — amenorrhea 16 months — since last child — cautery treatment 5 years ago and 8 months ago — dilated elsewhere two weeks ago — now has severe cramps — complete cervical stenosis — radical conization.

(b) Free of symptoms — patent canal — menses normal — 4 months after treatment.

MEET OUR CONTRIBUTORS

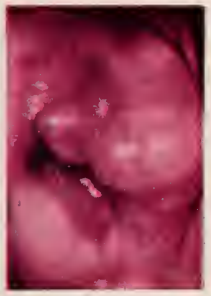
Co-authors of "557 Case Histories of Cervical Disease" appearing in this issue are two Oklahoma City physicians. *Kenneth J. Wilson, M.D.*, who limits his practice to Gynecology, is a member of the Oklahoma City Doctors Dinner Club and Society of Gynecologists and Obstetricians. *Charles Hugh Wilson, M.D.*, limits his practice to general surgery. He served in the U. S. Army from 1941 to 1946.

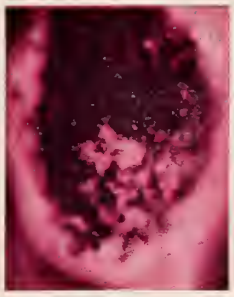
O. R. Gregg, M.D., Hugo, is co-author with Mary Jane McClintock of "Incidence of Intestinal Parasites in Southeastern Oklahoma." Dr. Gregg is director of the Choctaw-McCurtain County Health Dept. He belongs to the Okla. Public Health Assoc., the American Public Health Assoc., and the Board of the Oklahoma Division of the American Cancer Society. *Mary Jane McClintock, B.S., M.T.*, Parasitologist, State Health Dept., is a member of the American Society of Medical Technologists, the Registry of Medical Technologists, A.S.C.P., and American Public Health Assoc.

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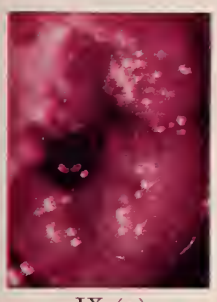
Herschel J. Rubin, M.D., Tulsa pediatrician, wrote "Convulsions in Infancy." A graduate of Hahnemann Medical College, Philadelphia, he served five years as medical officer in the U. S. Army and holds a reserve commission as Major in the Medical Corps.

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VIII (a)

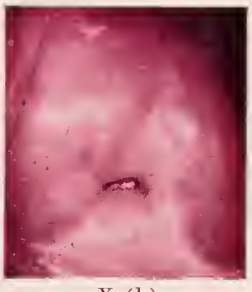

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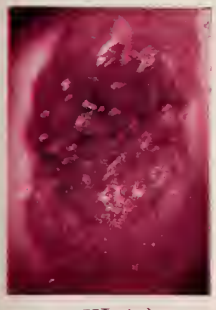

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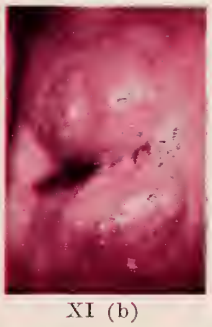

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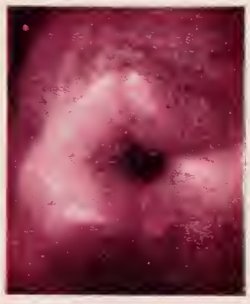

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X (a)

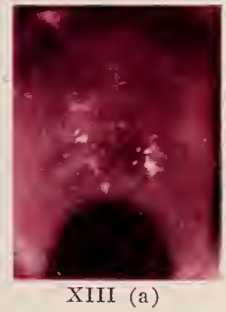

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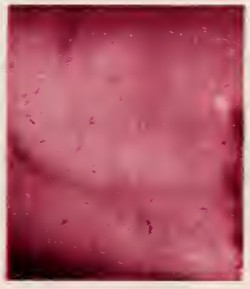

XI (a)


XI (b)


XI (c)


XII (a)


XIII (a)


XIV (a)


XIV (b)

INCIDENCE OF INTESTINAL PARASITES IN SOUTHEASTERN OKLAHOMA*

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This paper was prompted when one of us, while doing routine school examinations, found numerous school children taking treatment for anemia. Some had been taking liver shots for as long as two years with no appreciable gain in weight or red cell count. When questioned as to the cause of these anemias, neither parents nor doctor attempted an answer. A routine stool examination and a serum agglutination has enabled us to solve the problem for most of these children.

Two or three had an old case of tularemia, one had a case of undulant fever, and practically all had intestinal parasites of some form or another. When we consider that the hookworm is the prince of bloodsuckers, and that Ascaris lumbricoides and Endamoeba histolytica penetrate the body tissues by burrowing, is it any wonder that patients infested with intestinal parasites are anemic?

Statistics show that in 1945, six cases of hookworm and 28 cases of amoebic dysentery were reported in Oklahoma. In the past year we have found 66 cases of hookworm and 31 cases of amoebiasis in Choctaw and McCurtain Counties. This would indicate that Oklahoma physicians are not working over time looking for intestinal parasites.

At this time hookworm ranks first in clinical importance in this section of the state. With the increase in the number of trucks carrying fruits and vegetables from across the border, we prophesy that the time is not too far distant when amoebiasis will be a grave clinical and economic problem. A countryy in which the population has a 70 per cent infestation and condones the use of human waste for fertilizing fruits and vegetables is certainly a menace.

*Presented before the Section on Medicine of the Oklahoma State Medical Association at the Annual Meeting, May 16, 1947.

While we are particularly interested in hookworm and amoebic infestations, the other parasites must have attention. Ascaris lumbricoides and Strongyloides stercoralis can produce abdominal pain, temperature, headache, and loss of weight. The observation of our 38 cases of Giardia lamblia leads us to believe that this protozoan is also pathogenic.

Stool specimens were obtained from three sources:

1. School children who had a history of being "run down," with frequent stomach aches and disorder, headaches, or the mother stated that she thought the child had worms.
2. Routine food-handler examinations for those persons connected with the school lunch program in McCurtain County.
3. Routine food-handler examinations, mostly in the city of Idabel, which has an ordinance requiring all persons employed in food-handling establishments to take a physical examination, including an examination for intestinal parasites.

Where a person was found to have pathogenic parasites, other members of the family were asked to submit specimens.

Fecal speciments were submitted to the Oklahoma State Department of Health Laboratories for examination. Routine examination consisted of three procedures: (1) direct examination, using D'Antoni's iodine and saline preparations, (2) Faust's zinc sulphate flotation method for concentration of cysts and ova, and (3) cultures for the intestinal amoebae. The method of amoebic cultivation has proven to be satisfactory, since of the 31 individuals found to be harboring Endamoeba histolytica in Choctaw and McCurtain Counties, 13 cases were discovered by culture methods alone.

For diagnostic purposes, only one fecal specimen per individual was submitted to the laboratory for parasitic examination. Due to the fact that cysts and ova may be found in large numbers on one day, and the next day the number present may be so few as to be very difficult to find, it should be emphasized that for the most accurate laboratory results, a series of five specimens should be submitted. These may be obtained on successive or alternate days.

Fecal specimens received in the laboratory were divided into two groups: (1) Those obtained from food-handlers (see Tables I and II), and (2) those from non-food-handlers (see Tables III and IV).

Of the food-handlers' group, the age range was 16 years or over. Of the 239 persons examined in this group, only 32 were colored, so that the racial comparison was of little or no value.

Table I

CHOCTAW-McCURTAIN COUNTIES
FOOD-HANDLERS

Result of Examination	*Number*	*Per Cent*
Persons found to be negative for intestinal parasites	149	62.0%
Unsatisfactory (not repeated)	6	2.5%
Persons found to have one or more intestinal parasites	84	35.5%
Total number examination	239	100.0%

Of the 84 persons harboring intestinal parasites, a total of 127 parasites were found. Table II shows the different parasites found and the per cent of their occurrence in relation to the group of 239 persons examined.

Table II

Parasites Found	*No. of persons with parasites*	*Per cent infected among 239 examined*
Endamoeba histolytica	16	6.7%
Endamoeba coli	64	26.7%
Iodamoeba williamsi	4	1.6%
Endolimax nana	21	8.8%
Giardia lamblia	6	2.5%
Chilomastix mesnili	3	1.2%
Hookworm	10	4.1%
Ascaris lumbricoides	3	1.2%

While the 6.7 per cent incidence of Endamoeba histolytica as found in this group is considerably lower than that found by Dr. Donald M. McMullen,[1] University of Oklahoma School of Medicine, in his survey in Eastern Oklahoma, it should be emphasized that this group serves as a constant source of possible infection to the general population. It has long been an established fact that the infected food-handler is a ready means of spreading amoebiasis.

Of the second group, or the non-food-handler group, only 24.2 per cent of the individuals examined fell into the age group of 16 years of age or over; 57.3 per cent of those examined were in the 6 to 16 year age group, or what might be considered as the school age group. The smallest group was the preschool group, or those whose ages ranged from one to five years; these made up 18.5 per cent of the total examined. Here again the racial comparison was of no value, since only 51 of the 291 examined were colored.

Table III

CHOCTAW-McCURTAIN COUNTIES
NON-FOOD-HANDLERS

Result of Examination	*Number*	*Per Cent*
Persons found to be negative for intestinal parasites	139	47.7%
Persons found to have one or more intestinal parasites	152	52.3%
Total number examinations	291	100.0%

Of the 152 persons harboring intestinal parasites, a total of 278 parasites were found. Table IV shows the different parasites found and the per cent of their occurrence in relation to the group of 291 persons examined.

Table IV

Parasites Found	*No. of persons with parasites*	*Per cent infected among 291 examined*
Endamoeba histolytica	15	5.2%
Endamoeba coli	86	29.5%
Endolimax nana	40	13.5%
Iodamoeba williamsi	6	2.0%
Giardia lamblia	33	11.3%
Chilomastix mesnili	3	1.0%
Hookworm	55	19.2%
Strongyloides stercoralis	17	5.9%
Ascaris lumbricoides	6	2.0%
Hymenolepis nana	13	4.4%
Enterobius vermicularis	3	1.0%

In comparing the two groups it was found that the incidence of Giardia lamblia took a sharp rise from 2.5 per cent in the food-handler group to 11.3 per cent in the non-food-handler group. Accordingly the same rise was seen in the incidence of hookworm — 4.1 per cent in the food-handler group and 19.2 per cent in the non-food-handler group. These differences may be due to the fact that the second group was made up mostly of children. The very low incidence of Enterobius vermicularis is probably due to the type of examination made, since this parasite is not ordinarily found on routine examination. Had the N.I.H. swab, or the Scotch tape

swab been used, the incidence probably would have been much higher.

In conclusion we recommend to the physician that in all cases where the diagnosis is obscure, and particularly where there is an anemia and loss of weight, that an examination for intestinal parasites be made. We also ask that you report all of your cases of amoebiasis and hookworm to the State Department of Health.

We recommend to the Public Health Units, school nurses, and physicians, that they be mindful of intestinal parasites in all cases where the child is "run down," complains frequently of abdominal pain, or the mother thinks that the child has worms; and a stool specimen would be obtained for examination. Also, we would urge a routine stool specimen be made on all food-handlers, particularly those associated with school lunch programs.

To the laboratories, we recommend the flotation method as used by Faust. We also recommend that the laboratories instruct physicians, nurses, and even teachers in the proper methods of obtaining specimens for examination.

It is our opinion that amoebiasis and hookworm infestation is a potential clinical and economic liability, and we urge the Oklahoma State Medical Association and the Oklahoma State Department of Health to use every means necessary to control this hazard.

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TREATMENT OF PARASITIC INFECTIONS COMMON IN OKLAHOMA*

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In considering the treatment of parasitic infections several general points should be emphasized. In the first place, to give our population adequate medical care we must have a high index of suspicion if the cases are to be detected. Various surveys have shown that we have many different kinds of parasites and a relatively high incidence in Oklahoma.[1,2] It is important to get an accurate laboratory diagnosis on all suspected cases. None of the infections can be diagnosed by clinical symptoms with certainty and most of the parasitic infections require specific treatment.[3] After the diagnosis is made the clinician should visualize the location of the infection and try to estimate the damage. The complete removal of parasites is usually difficult. With most intestinal worms this is not always necessary, but with the protozoan parasites and a few of the worms any that remain will probably cause a relapse. Finally he should select a drug suitable for each patient and his infection. Many of the drugs used are toxic, especially the older ones. The use of chenopodium, emetine, plasmochin, and thymol for parasitic infections is a little like using dynamite to remove termites from your home. The therapeutic dose and the lethal dose are apt to overlap. In considering the drugs used in the treatment of parasites it will be necessary, because of the short time available, to give merely a summary of those most useful in treating the intestinal parasites.

There are two intestinal protozoa that can be pathogenic and are relatively common in Oklahoma, *Endamoeba histolytica* and *Giardia lamblia*. Infections of *E. histolytica* are difficult to eliminate and relapses are common. Three types of drugs are used, i.e., iodine and arsenic compounds, and an alkaloid. Diodoquin is the least toxic of the iodocompounds and is given, by mouth, 0.6 Gm. t.i.d. for 20 days.[4] In severe cases this may be increased to 0.8 Gm. t.i.d. Carbarsone is an arsenical drug and is given, by mouth, 0.25 Gm. b.i.d. for 10 days. Emetine hydrochloride is a toxic alkaloid and should be used only in cases with dysentery, amebic hepatitis, or amebic abscess.[5] It is given, sub-

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cutaneously, 0.065 Gm. per day until symptoms disappear but never for more than 12 days. One of the other drugs should be used to remove the intestinal infection. It should be remembered that all persons harboring *E. histolytica*, even when completely asymptomatic, should receive treatment.

Giardia lamblia is undoubtedly the easiest of the parasitic infections to eradicate in the human body. In a series of patients, the author has found that atabrine, by mouth, 0.1 Gm. per day for three days is very effective against this organism. The dose can be increased to 0.1 Gm. t.i.d. for five days if necessary.

The two safest drugs to use in treating hookworm infections are tetrachlorethylene and hexylresorsinol. The first is given, by mouth, 3 cc. for adults, or 3 minums per year of age in children. The patient should have pre- and post-treatment saline purges, using sodium sulphate or sodium phosphate. Tetrachlorethylene should not be used alone if the patient also has Ascaris. In such a case 2.7 cc. of tetrachlorethylene is mixed with 0.3 cc. of oil of chenopodium. Hexylresorcinol is the drug of choice in patients that are critically ill, pregnant, etc. Often it is not completely effective but it will reduce the worm burden to a point where the patient is not seriously affected by the worms that remain. It is given, by mouth, 1.0 Gm. in enteric coated capsules for adults, and 0.6 Gm. in pre-school children. Pre-treatment purge is not necessary and post-treatment purge is optional. The treatment can be repeated if necessary. The administration of iron and supplying an adequate diet is important in patients showing clinical symptoms of hookworm disease.

The drug of choice for removing *Ascaris lumbricoides*, the large roundworm, is hexylresorcinol. It is given as for hookworm but its effectiveness is increased if a pre-treatment purge is given. The use of a mixture of tetrachlorethylene and chenopodium for this parasitic worm has been discussed above.

Pinworm (*Enterobius vermicularis*) infections respond to gentian violet in enteric coated capsules, by mouth, 0.065 Gm. t.i.d. for eight days, rest seven and repeat.[6] In children one should use 0.010 Gm. per day for each year of age and divide it into three doses. This infection is acquired directly so if one member of the family has it, the others probably have it too. All infected persons in a household should be treated or therapeutic measures will be of little value.

Gentian violet is also of value in treating *Strongyloides stercoralis*. In persons infected with this worm the drug is given, by mouth, 0.065 Gm. t.i.d. for 17 days.

Trichuris trichiura, the whipworm, is the most resistant of the intestinal worms. Tetrachlorethylene, gentian violet, hexylresorcinol, and the tetrachlorethylene-chenopodium mixture are the only drugs that are readily available that offer some chance of success. It is very important that the intestine be well cleaned out with a purge and high enemas before the treatment is started.

Taenia saginata and *Taenia solium*, beef and pork tapeworms, are often very hard to remove from the human intestine. Great pieces of these tapeworms may appear after treatment but unless the scolex is removed little improvement can be expected. Oleoresin of aspidium is a drug that has been used for many years for these infections but it is dangerous. It is given, by mouth, three doses of 10-20 minums each, taken half an hour apart. For children the dosage is one minum per year of age. The patient should have pre- and post-treatment saline purges. Hexylresorcinol, as given for hookworm, and carbontetrachloride, three cc. for adults, may be of value if the infection does not respond to aspidium.

Hymenolepis nana is the most common tapeworm found in our population. It can be removed by using hexylresorcinol, as with hookworms, or oleoresin of aspidium, as with *Taenia*.

As stated earlier the removal of parasites is often difficult and incomplete, and relapses are common from those that multiply within the body or are directly infective. This makes it essential that post-treatment examinations be made. Ideally it is well to follow the effect of the treatment during and immediately after administration, then checked at intervals, up to six months in the case of *Taenia*. If this is impossible, at least a check should be made at either three or six months after treatment.

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CONVULSIONS IN INFANCY*

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Convulsions are frequently seen in infants. No condition is more terrifying or a greater cause of alarm than a fit or "seizure." It is, therefore, important to be able to correctly diagnose and treat them promptly.

The exact mechanism of convulsions is still largely undetermined. It has often been stated that the brain tissue of the infant is more irritable than that of an adult: this has never been proven. We do know, on the other hand, that the brain of a child has a greater water content, a more rapid metabolism, and a lack of myelin. It is also more immature in its cerebral inhibitory mechanism.

Peterman[1] believes that infections or fevers precipitate convulsions only in those children who have a potential convulsive state. Various observers have noted that from 15 per cent to 20 per cent of children who have attacks in childhood associated with fever have spontaneous convulsions in later life. Certainly it is important to thoroughly investigate every case even though the cause may, on the surface, appear obvious.

Much hope for help in diagnosis had been expected from the electroencephalogram. It is true that this instrument is of great value. However, the equipment is still not generally available in the smaller communities. Buchanan[2] observes that the electroencephalogram is of less value in infants under five years than in older subjects, since the electrical discharges of the cortex of a young child are often normally irregular. The instrument is of most value in the diagnosis of epileptic equivalents and should really be used whenever a diagnosis of epilepsy is in doubt.

Numerous classifications have been suggested for types of convulsions. In a short presentation such as this we cannot consider all of them. For this discussion I have divided infancy into two groups: the neonatal period or up to about the first month of life, and the period thereafter until two or three years of age. I will try to bring out a few interesting and important points about some of the more common causes of convulsions in these age groups.

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FIRST MONTH OF LIFE

Certain birth injuries are mostly responsible for convulsions in the neonatal period. Injuries during the process of birth usually cause bleeding within the skull with serious results. In fact, Brennemann[3] states that 25 to 40 per cent of the deaths of the newborn are due to intracranial hemorrhage.

Many people tend to blame the obstetrician for all cases of intracranial hemorrhage. Certainly poor obstetrics can increase the chances of injury to the infant. However Adair[4] pointed out that even in a well-supervised and well-staffed hospital about 31 per cent of deaths in the newborn period are due to trauma. Let us think about this for a moment. During the course of labor there is an elongation of the child's head with a reduction in the size of the intracranial cavity; the pressure being intermittently applied causes a marked change in the fluid of the intracranial cavity, which results frequently in a congestion of the veins and a displacement of the cerebrospinal fluid. There is tension on the falx and the tentorium at the same time, and tears may occur, especially in the tentorium. There also may be hemorrhage into the brain itself.

Pathologically, not only may there be hemorrhage, but it is important to remember that frequently there is edema of the brain and meninges with resultant superficial irritation of the brain coverings, often leading to an aseptic meningitis, and subsequent adhesive bands between the arachnoid and pia mater may occur.

Craig[4] reports 126 cases of intracranial bleeding in the newborn period divided as follows:

Subdural hemorrhage	62
Subarachnoid hemorrhage	36
Intraventricular hemorrhage	22
Hemorrhage into the brain	6

The symptoms of intracranial hemorrhage are varied and inconstant.[3 5 6 7] They may be present at birth or delayed for a few

days depending on the severity of the bleeding. There may be feeble cry, somnalence, irritability, failure to nurse, cyanosis, irregular respirations, fever, nystagmus, and of course convulsions.

There is no definite pattern for these convulsions. Usually they are of the tonic-clonic type, especially those due to extracranial conditions. Jacksonian or unilateral convulsions do not necessarily mean there is a localized lesion. Other signs are rigidity, opisthotenus, tense fontanelle, twitchings, and paralysis.

It is desirable in most cases to examine the cerebrospinal fluid. The presence of crenated red cells or xanthochromia suggests bleeding. However, in the absence of bloody fluid, hemorrhage still may be present. The only way a subdural hemorrhage can positively be diagnosed is by needling of the subdural space and finding bloody fluid. This should be done on both sides of the skull. The space is best entered at the lateral angles of the open anterior fontanelle.

Treatment for intracranial bleeding varies with the cause. Sedatives are important. Vitamin K is of doubtful value unless there is definite evidence of hemorrhagic disease of the newborn. Repeated spinal taps should not be done unless there are evident signs of increased intracranial pressure. In cases of subdural hematoma, Ingraham[8] advises daily subdural taps, later followed by radical surgery in order to remove the organized clot and membrane. This is done on one side of the skull, then the other.

Another important cause of convulsions during early life is anoxia or asphyxia during delivery. Anoxia[9] causes an increase in the hydrogen ion concentration of the tissues with the resultant stages of, first, stimulation, then discharge of energy with subsequent paralysis of nerve cells. As a result of its effect on smooth muscle, there is loss of tone and dilation of blood vessels with escape of plasma and red cells into the tissues. Pathologically, there is congestion, edema, hemorrhage, and finally brain degeneration. Active treatment consists mainly of stimulation to the infant and providing an adequate supply of oxygen.

Hemorrhagic disease of the newborn may be a cause of convulsions. One should keep in mind, however, that bleeding during the first 24 hours of life is probably not due to a vitamin K deficiency since this disease invariably is manifested from the second to the seventh day of life. Bleeding from a variety of sites including skin, mucous membranes, and bowel, as well as increased prothrombin time help in the diagnosis.

Tetany in the newborn period is often blamed, but is actually a rather uncommon cause of convulsions. Peterman reported only five cases of proven tetany of the newborn in 2,500 cases of convulsions in children over a 20-year period. Bakwin[10] states that the cause of this type of tetany is due to a transient physiological hypoparathyroidism. The diagnosis is not an easy one. Some of the symptoms are hyperirritability associated with muscular twitchings, tremors, or convulsions. Hyperpyrexia and subcutaneous edema may occur. Laryngospasm and carpopedal spasm are not common in this type of tetany. One should remember that the serum calcium in the newborn period is quite unstable. Therefore, a low serum calcium without clinical findings does not cinch the diagnosis of tetany. Usually the serum phosphorus is elevated. Not long ago I attended a Symposium on Convulsions given by Dr. Allan Butler at the Massachusetts eGneral Hospital. He brought out the fact that it takes only 30 minutes to do a serum phosphorus and about twelve hours to run a serum calcium. In the neonatal period, therefore, if the N P N is normal and the phosphorus elevated, we can expect the calcium to be low and can start treatment at once.

Treatment consists of five to ten cc. of intravenous 10 per cent calcium gluconate followed by daily doses of several grams of calcium chloride or calcium lactate in 10 per cent solution orally for a week or so. Calcium intramuscularly is not recommended, for it may cause a slough. Dihydrotachysterol[6] or AT-10 in doses of 0.5 cc. given three times daily increases the urinary excretion of phosphorus and increases the absorption of calcium from the intestine. Since this is probably a parathyroid deficiency and not a vitamin deficiency, vitamin D has no value in treatment.

Infections also occur in the newborn period as causes of convulsions. Meningitis is usually caused by a spread from a contiguous focus, such as an ear infection or a blood stream infection. The symptoms are vague and the prognosis poor. The treatment for these conditions is the same as for other age groups.

Some other causes of convulsions in the neonatal period are: tetanus, brain tumor, renal insufficiency, toxoplasmosis, syphilis.

ONE MONTH TO TWO YEARS

Acute infections account for a large per-

centage of convulsions in this period. The most common types of intracranial infections are meningitis, encephalitis, brain abscess, sinus thrombosis, or tetanus. Typhus fever and malaria may also cause convulsions. Extracranial diseases can be any of the acute exanthemata or such diseases as pneumonia, pyelitis, and many others.

Tetany due to vitamin D deficiency is not too common today because of the emphasis on vitamins. It may occur, however, between the ages of four month and three years. Symptoms noted are spontaneous muscular twitchings, laryngospasm, or generalized convulsions. To have manifest convulsions in tetany, usually the serum calcium is below 7 mgm/100 cc. Treatment consists of four to six grams of 10 per cent calcium chloride solution at once by mouth with one to three grams daily for one to two weeks. Calcium gluconate may be given intravenously. AT-10 is not indicated in this type of tetany because it is slow in its action and also tends to be rachitic. Vitamin D may be started after a few days in doses of 4,000 to 5,000 units daily. When the rickets is healed it can be decreased to the usually prophylactic dose.

I shall only mention epilepsy in passing. Certainly it is not common under two years of age, but must be considered in the differential diagnosis.

A workup for convulsions might be summarized as follow:

1. Complete history.
2. Physical examination.
3. Urinalysis and blood count.
4. Spinal tap or cisternal tap.
5. Blood chemistry: calcium, phosphorous, phosphatase, N P N, serum protein, and fasting blood sugar.
6. X-ray of skull and long bones.
7. Electroencephalogram.
8. Air encephalogram.

In reference to the workup, the history should include a detailed birth history, previous attacks of convulsions, possibility of dietary deficiency, head injury, hemorrhagic tendency, exposure to infection, or hereditary predisposition to seizures. A neurological examination including an inspection of the fundi of the eye should be done. In the absence of any marked increase of intracranial pressure, a lumbar puncture or a cisternal puncture should be done in all cases. The spinal fluid should be examined for its gross appearance, globulin, sugar, chloride, cell count, serology, and the presence of pathogenic micro-organisms. X-ray of the long bones may show lead poisoning or rickets. X-ray of the skull may show an expanding intracranial tumor.

TREATMENT

The treatment of convulsions naturally varies with the cause.[2 6 11] However, in the control of the acute attacks, several drugs are most effective. Sodium phenobarbital probably is the best and the safest. It is given in doses of one to two grains subcutaneously, even to infants, and may be repeated in several hours. Avertin by rectum, especially for status epilepticus in doses of 50 to 75 mgm/kilo is excellent. Magnesium sulphate intramuscularly in doses of one to two cc. of the 50 per cent solution is of questionable value in most of the types of convulsions herein discussed and is very painful. Paraldehyde, a very excellent drug and often overlooked, may be given intramuscularly in one to two cc. doses without danger. Inhalation of anesthesia of chloroform or vinyl ether is also very effective. Cool enemas and sponge baths help to bring down the body temperature when high fever is present.

SUMMARY

1. A brief review of convulsions in infancy is presented with a discussion of the most common causes. Emphasis is placed on age distribution.

2. In the first month of life, birth injuries are the outstanding cause of convulsions. These frequently are due to the stresses of labor and are not salely the fault of the obstetrician.

3. Tetany of the newborn period is relatively rare and is often incorrectly considered the cause of convulsions.

4. In the group from one month to two years of age, acute infections, either intracranial or extracranial, are the most frequent causes of convulsions.

5. A suggested workup for convulsion cases is presented.

6. Treatment of the acute attack is briefly discussed.

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CLINICAL PATHOLOGIC CONFERENCE

University of Oklahoma School of Medicine

Presented by the Departments of Pathology and Urology

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DR. HOPPS: The case for our consideration today is a diagnostic problem and will be presented by Dr. Hayes. Dr. Hayes never saw this patient, and the information upon which he will base his diagnosis is the same as that which has been presented to you.

PROTOCOL

Patient: L. M., white male, age 61; admitted April 29, 1946; died May 10, 1946.

Chief Complaint: Frequency, two years; hematuria; nocturia; low back pain.

Present Illness: This 61 year old white male had had nocturia one time nightly for five years prior to admission. He was otherwise apparently well until February, 1944, when he first noticed frequency every 30 minutes. The quantity of urine was small. Following this, nocturia increased so that by November, 1945, it was necessary to void six to eight times each night. Burning and pain with micturition were first noted in the summer of 1945. With these latter symptoms the patient had pain in the right hip. At first this was mild but later the pain was quite severe and associated with low back pain. Two weeks prior to admission he was admitted to a small hospital in Eastern Oklahoma for appendicitis and an appendectomy was performed. Subsequent to this he was transferred to University Hospitals.

Physical Examinations: Blood pressure was 110/70. Heart contractions were of normal rate, rhythm, and force. No murmurs were heard. The chest examination was not remarkable. On rectal examination the prostate was two and one-half times enlarged, bony hard and nodular. The right patellar reflex was hyperactive; the left hypoactive. Otherwise, physical findings were not remarkable.

Laboratory Data: Roentgenogram of the pelvis on November 6, 1945, showed "a moderate degree of decalcification of the wing of the ileum and increased density of the fourth and fifth lumbar and sacral vertebrae." A follow-up plate taken on May 1, 1946, demonstrated a marked increase in the density of the bones of the pelvis and lumbar spine. The chest plate exhibited some sclerosis of the ribs and "suggestive pathology" of the left lung field. Urinalysis (Outpatient Clinic) in November, 1945, revealed a specific gravity of 1.024 with 10-15 white blood cells per high power field and two to three granular casts. At this time hemoglobin was 9 Gm. and red blood cell count 3.34 million with a normal white blood count and differential. Urinalysis at the time of admission revealed 2 plus albumin, 5-10 white blood cells and 1,000 red blood cells per high power field. There were 2.75 million RBC's/cu.mm., seven grams % hemoglobin, and a normal white blood cell count and differential. The blood non-protein nitrogen was 120 mg.%, phosphorus 7.2, and total protein 5.5. The blood Mazzini test was negative and the erythrocyte sedimentation rate 80 mm. in one hour. Additional determination of the NPN and total protein at later dates revealed no significant change.

Clinical Course: At the time of admission the residual urine was found to be 150 cc. The patient was given 500 cc. transfusions of whole blood on May 2, 1946, and May 3, 1946. During the evening of May 5, 1946, after receiving 1,400 cc. of I. V. fluid (5 per cent dextrose in saline), the patient's blood pressure dropped to 80/40, the pulse rose to 136/minute and was weak; respirations were rapid. The patient was cyanotic and anxious and he developed moist rales in the bases of the lungs. The liver became palpable two or

three cm. below the costal margin and petechial hemorrhages occurred over the chest and abdomen. He had been receiving alkali by mouth. At this time he was given four Cat Units of digifolin, nasal oxygen, and plasma I. V. Following this, his condition improved both subjectively and objectively. His dyspnea decreased, the cyanosis cleared and the pulse was recorded as being 120/ minute, full and strong. Digitalization was continued and the patient's condition continued to improve. On May 6, 1946, "definite icterus" was noted which had not been observed the previous day. On May 7, 1946 (48 hours later) the blood pressure was "good" and the pulse considerably slower. On May 8, 1946, the patient refused food and began to vomit. The following day he was comatose. His blood count was essentially unchanged except for a moderate shift to the left — WBC's numbered 7,000 with 83 per cent neutrophils, 24 of which were stab forms. There was 1-2 plus pitting edema, incontinence of bowel, "some nystagmus at times." Icterus was more pronounced. Bleeding from the indwelling catheter began for the first time since a day or two following his initial hospitalization. During this night the patient expired — 12 days after his admission.

CLINICAL DIAGNOSIS

DR. HAYES: The story of this patient is an old familiar song. You have read this abstract so it is not necessary for me to reread it. He was 61 and his complaints were directed principally to the genito-urinary system. One fundamental thing we must keep in mind is that the majority of men in the seventh decade have enlarged prostates. If an individual develops prostatic hyperplasia and resultant obstruction of the prostatic urethra certain things will happen. The trigonal muscle will become hypertrophied and the wall of the bladder will become thickened. If this process continues, the effects of obstruction and increased urinary pressure will be reflected in the ureters, the pelves, and finally there may develop considerable renal damage. Here we have a 61-year-old man who was admitted complaining of hematuria, low back pain, and nocturia. He had apparently had slight nocturia for several years. This symptom became much worse during the last two years of his illness. Nocturia is often one of the first symptoms of prostatic enlargement. It may also be an early symptom of renal insufficiency since, if the kidney is unable to produce a concentrated urine, the volume output during the night will be increased. In this case we do not know whether the nocturia was associated with polyuria or whether the volume of night urine was small. It seems more likely that prostatic enlargement was the basis for this complaint. Hematuria is also frequently observed as an effect of prostatic hyperplasia. This results when the prostatic lobules push together in the midline and actually traumatize each other. Hematuria occurs more often in prostatic hyperplasia than in cases of carcinoma of the prostate. We must also consider the possibility of a stone.

Two years before death the patient developed pain and burning on urination. He began to complain of low back pain. This latter symptom is of considerable importance. Low back pain of a mild degree is not uncommon in persons of this age because they often have a little rheumatism. This man's pain was sufficiently acute so that he was operated upon for appendicitis however. In a 60-year-old person appendicitis is a very unusual thing. With signs and symptoms referable to the urinary tract and with low back pain, or pain in the right lower quadrant, I would think first of some disease of the ureter. Perhaps the most significant bit of information which we have is that this patient had a prostate which was 2½ times enlarged, nodular and hard. On the basis of this observation, plus the various symptoms which we have discussed and the x-ray finding of increased density of the lumbar and sacral vertebrae, I have no hesitancy in making a diagnosis of *carcinoma of the prostate with osteoplastic metastases to the lumbar and sacral spine.*

I had not actually seen the x-rays before this moment. Whenever you see an irregular moth-eaten area such as this, it represents decalcification resulting from an active local osteolytic process which, in this case, was carcinoma. Elsewhere, in the lumbar and dorsal vertebrae one can see the areas of increased density which were described — osteoplastic metastases from the prostatic carcinoma. In the chest film I think that I can see evidence of pulmonary metastases.

Now to consider a little further this man's condition terminally: his blood pressure was 110/70 which is a little unusual in these patients. I suspect that this was a manifestation of exhaustion and perhaps impending cardiac failure. The N.P.N. was 120 mg.% which means that he was uremic. He had residual urine of 150 cc. which is ½ of his bladder content. He was, then, in an advanc-

ed state of uremia and exhaustion. As a part of his initial treatment he was given considerable amounts of parenteral fluid, on one occasion 1400 cc. within a relatively few hours. I think that this is too much fluid to give a patient of this type especially with a blood pressure 110/70 which may indicate beginning cardiac failure. Perhaps he could have taken 1000 cc. without difficulty, but with the larger amount he apparently developed acute cardiac failure, characterized by marked apprehension, cyanosis, and shortness of breath. His systolic pressure dropped to 80. This could have been the result of myocardial failure or possibly the result of a pulmonary embolus. His liver was enlarged; it was down below the ribs two or three fingers and this was probably the result of congestion. I do not believe he had metastases to the liver. It is difficult for me to explain the jaundice which this man presented terminally. I have seen it frequently in patients with uremia, however.

CLINICAL DISCUSSION

QUESTION: Do you believe that the appendectomy altered the course of this patient's illness?

DR. HAYES: This probably had some adverse effects on his cardiac reserve and his general resistance.

QUESTION: What caused bleeding from the urinary tract the day before death?

DR. HAYES: This may have been related to the uremia plus irritation from the catheter.

QUESTION: Do you think that the infusion of 1400 cc. of fluid precipitated cardiac failure in this patient?

DR. HAYES: I think so, in considering this man's age and general condition. Remember too that there may have been renal damage interfering with the excretion of this fluid. I should like very much to hear Dr. Hopps' views on this subject. Intravenous fluids, in elderly people, should not be given at a rate exceeding 300 cc. an hour as a rule.

QUESTION: What about the petechial hemorrhages that developed during the last few days?

DR. HAYES: I believe that these may have been related to general sepsis. This also would have been a factor in the bleeding from the urinary tract.

ANATOMIC DIAGNOSIS

DR. HOPPS: There were a number of interesting features disclosed at necropsy which were not apparent from the clinical data available. In addition to establishing the major diagnosis, Dr. Hayes hit upon many of these secondary changes. This white male was emaciated; he weighed but 120 pounds. There was 1+ pitting edema of the extremities and 2+ edema over the sacrum. This is rather significant and probably relates to the administration of parenteral fluids. In answer to Dr. Hayes' question, I have performed autopsies on person who succumbed because of too much intravenous fluid given too fast. We feel, as Dr. Hayes does, that one should not give too much fluid, especially isotonic saline. In conditions of dehydration, one is concerned, of course, with restoring the fluid balance. Particularly in infants and in older patients, where there is danger of cardiac failure, glucose in water is much safer to use than solutions of sodium chloride. In this case it is likely that the large amount of saline increased the blood volume, produced edema of interstitial tissues, and precipitated heart failure. The fact that this man had hypoproteinemia also was an important consideration and was an additional reason for not giving large amounts of isotonic saline. Actually then there are three factors related to the development of his edema: (1) excessive amounts of saline given intravenously, (2) hypoproteinemia, and (3) heart failure. These were all interrelated.

At necropsy, the petechial hemorrhages were more extensive than were recorded in the chart. In addition to those in the skin, hemorrhages were also present in mucous and serous membranes. The fact that there was rather marked jaundice suggests that hepatic dysfunction may have been related to this bleeding tendency. There are several ways that the liver can affect abnormal bleeding since it is the sole source of prothrombin and fibrinogen. Furthermore, the absorption of vitamin K is dependent upon the secretion of bile and its presence in the intestinal tract. There was a moderate amount of fluid in the pleural cavities and an excess of fluid in the pericardial cavity. This suggests hypoproteinemia as a causative factor. The liver extended 6 cm. below the costal margin in the right midclavicular line. It weighed 2800 Gm., approximately twice the normal size. One does not expect the liver to increase in size to this extent simply as a result of chronic passive congestion. The spleen was enlarged also, about threefold (390 Gm.) The pelvic organs were fused into a solid mass by dense adhesions, the result of direct infiltration of carcinoma which originated in the prostate. This adherent mass included the urinary bladder, the prox-

imal portion of both ureters, the epididymis, inguinal lymph nodes, and the rectum. As a result of this there was rather high grade obstruction to the ureters with moderate hydro-ureter and hydroephrosis, bilateral. In addition there was extensive acute inflammation of the entire urinary tract. The kidneys were each enlarged about two times and presented many patchy areas of inflammation. In some of these areas there was extensive recent hemorrhage. The pelvis of each kidney was covered with purulent exudate. The wall of the urinary bladder was markedly thickened as a result of hypertrophy, carcinomatous invasion, inflammation, and hemorrhage. From the median lobe of the enlarged prostate there projected a soft yellow cauliflower mass of neoplastic tissue, 2 x 3 cm. The gallbladder was acutely inflamed and contained 300 cc. of thin seropurulent fluid. Within several days this would probably have progressed to frank empyema. The lungs weighed one and a half to two times the normal. They were subcrepitant and boggy. On cut surfaces, red frothy fluid exuded. Microscopic studies revealed the major change to be hemorrhage and edema, with but moderate bronchopneumonia. The heart, on external surface, appeared relatively normal and there was no evidence of cardiac infarction. Multiple sections revealed patchy interstitial fibrosis however, and thus provided a morphologic basis for myocardial failure.

There was no evidence of distant tumor metastases other than those described in the pelvis and lumbar and sacral vertebrae. The liver and the lungs occasionally are the sites of metastases from carcinoma of the prostate, but none were present in this case. As a rule, metastases occur in the inguinal and periaortic lymph nodes and the bones of the pelvis and lower spine. In one large series of cases, bony metastases were reported as occurring in 50 per cent. It used to be thought that such metastases represented an effect of generalized hematogenous dissemination of tumor emboli. From the work of Batson however, it appears that metastases to the pelvis and the vertebral bodies may be the result of retrograde flow through the veins which drain these parts. This would explain the frequent occurrence of osseous metastasis without pulmonic metastasis in patients with carcinoma of the prostate.

Now to consider more in detail some of the signs and symptoms pointing to hepatic deficiency. The liver exhibited a marked toxic hepatitis. This was not spectacular in the sense that there were large areas of necrosis or extensive regions of fibrosis, but careful inspection revealed that the hepatic cells had lost most of their glycogen. There were degenerative changes in the nuclei and the intercellular boundaries were no longer distinct. Diffuse injury of this sort can produce severe hepatic deficiency. In addition to the diffuse degenerative changes, there were focal areas of acute-subacute inflammation in relation to bile ducts, i.e., pericholangitis. This is readily explained by the acute cholecystitis. Our final anatomic diagnosis was as follows:

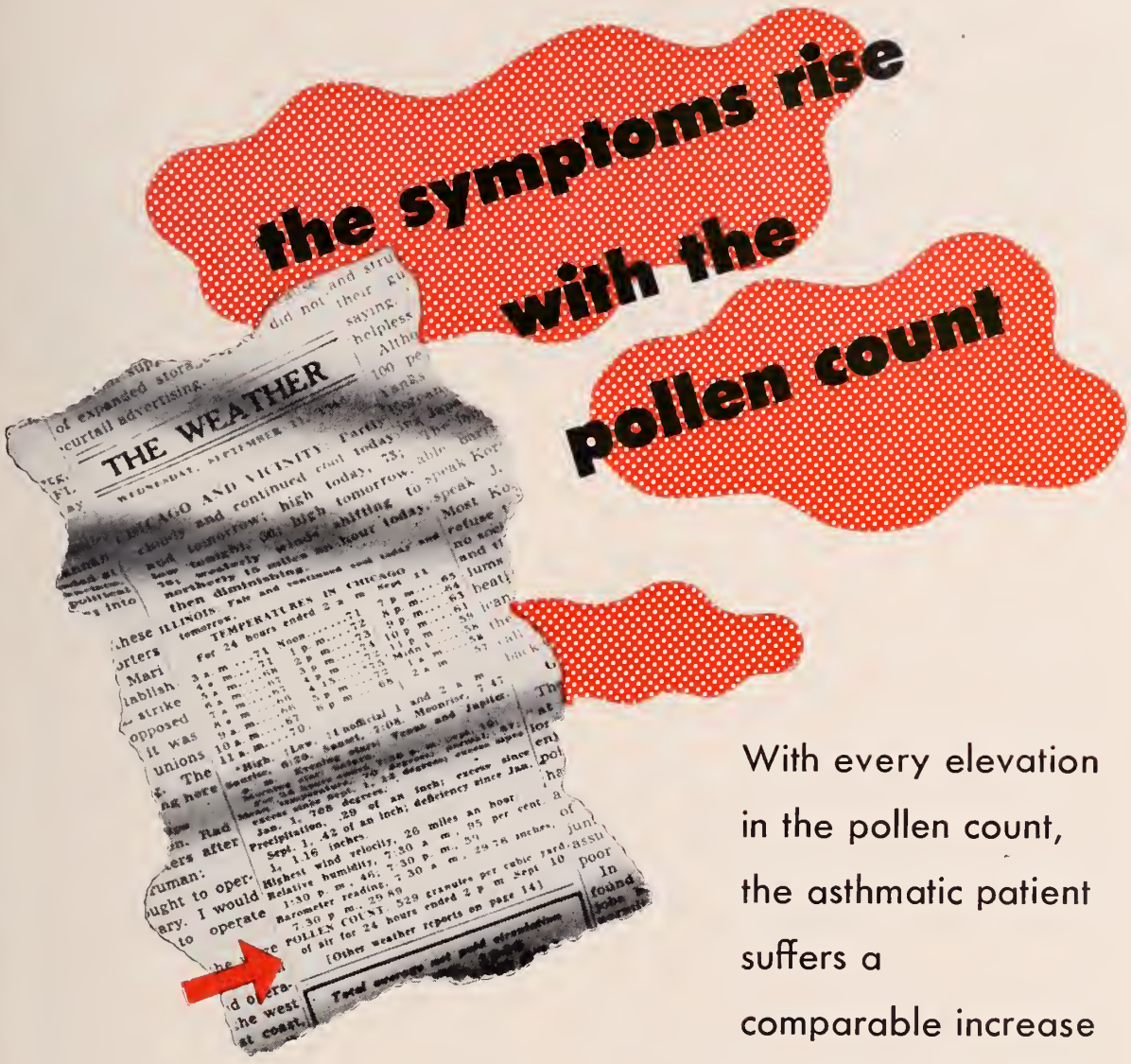
1. (Cause of Death) Extensive severe acute pyelonephritis, ureteritis and cystitis with extensive hemorrhage.
2. Carcinoma of the prostate, columnar cell (scirrhous) with extensive invasion of the periprostatic tissues, bladder, seminal vesicles, left lower ureter, retroperitoneal, pelvic, periaortic and peri-iliac lymph nodes, lumbar vertebrae, and left ileum.
3. Toxic hepatitis with marked icterus and icteric nephrosis.
4. Septic splenitis, moderate.
5. Confluent hypostatic bronchopneumonia, especially left lower lobe.
6. Acute cholecystitis.
7. Coronary atherosclerosis, moderate, with myocardial fibrosis, slight.
8. Calcific valvulitis, mitral valve, slight.
9. Cardiac hypertrophy, slight.
10. Chronic passive congestion of viscera.
11. Dependent edema.
12. Hydrothorax, right, slight, with marginal atelectasis.
13. Wound of operation (two weeks old): Healed McBurney incision — appendectomy.
14. Duplicated left coronary artery (congenital anomaly).
15. Sebaceous cyst of the scalp.
16. Atrophy of testes, moderate (sequel to stilbesterol therapy).

DISCUSSION

DR. HAYES: The acute gallbladder involvement is sometimes seen in patients with prostatic hyperplasia and urethral obstruction. Do you have any explanation for its occurrence in this case?

DR. HOPPS: This patient probably had septicemia and I suspect that his gallbladder infection was a complication of this blood stream infection. This patient was mal-

(Continued on Page 314)



With every elevation in the pollen count, the asthmatic patient suffers a comparable increase in the severity of symptoms. In the dyspnea of allergic asthma, Aminophyllin has been found to provide efficient relief.

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Finis Ewing, M.D., of Muskogee, arrives early at the Registration Desk, 16th Floor, Mayo Hotel.



A view of exhibitors' row, 16th Floor, Mayo Hotel.

THE FIFTY-FOURTH ANNUAL MEETING OF the OSMA, held at Tulsa May 14, 15, and 16, proved to be highly successful, from the signing up of the first registrant to the final notes of the orchestra at the President's Inaugural Dinner Dance, which closed the three-day activities.

Delegates from County Societies got their important work over early at the House of Delegates meeting May 12, and were then free to enjoy the Scientific Program and social activities. New officers of the Association were elected and important changes were made in the Constitution and By-Laws. Among these was the abolition of last year's Special Assessment for carrying out the important educational program of the Association and an increase in 1948 membership dues to carry on this activity. Changes were made in the provisions for membership in the Association: A new category of "Life Membership" was created, definition of Honorary Memberships was modified, and special recognition was provided for members who have been practicing medicine over 50 years. Among other innovations was provision for and election of Vice-Councilors to assist the Councilors in performing their duties.

The Scientific Program, headed by an outstanding group of guest speakers from all parts of the country, was enthusiastically received. Grouping of sections into two divisions only, the Section on Medicine and the Section on Surgery, incured a large attendance for all speakers and proved highly satis-

New OSMA President, Paul B. Champlin, addresses members and guests at the Inaugural Dinner Dance. Dr. Roscoe L. Sensenich, guest speaker, looks on.



Roscoe L. Sensenich, M.D., Chairman of the Board of Trustees, A. M. A., speaks at the President's Inaugural Dinner Dance. At the right is M. J. Searle, M.D., Tulsa.





Guest speaker Bedford Shelmire, M.D., of Dallas, Texas, speaks on "Common Skin Diseases" before the General Session of the Scientific Program. Paul B. Champlin, session chairman, is on the right.



Past presidents of the OSMA assembled around this breakfast table at a meeting sponsored by Finis Ewing, reading from the front left clockwise around the table, are Paul B. Champlin, Albert Cook, T. H. McCarley, Sam McKeel, C. E. Northcutt, H. C. Weber, J. S. Fulton, George Osborn, L. C. Kuyrkendall, R. V. Smith, J. Hutchings White, L. S. Willour, P. P. Nesbitt, McLain Rogers, Finis Ewing, H. S. Speed, A. S. Risser, Ellis Lamb, E. S. Lang, J. M. Byrum, Louis Ritzhaupt, V. C. Tisdal, and C. R. Rountree.

factory in most instances. Publications of the scientific lectures in the Journal during the coming year is anticipated.

The Woman's Auxiliary was very much in evidence at the meeting, both at their own business session May 14 and at the various social functions which extended over the week. New officers were elected, headed by the new President, Mrs. W. T. Mayfield, Norman.

An unusually interesting group, brought together by Finis Ewing, of Muskogee, was a breakfast held the morning of May 15 at which past presidents of the OSMA were the guests of Dr. Ewing. Over 20 past presidents of the Association were present.

The 54th Meeting was brought to a close by the President's Inaugural Dinner Dance the night of May 16, at which formal presentation of a gavel was made to outgoing President L. C. Kuyrkendall, and Dr. Paul B. Champlin greeted the assembled guests as the new OSMA President. This event was highlighted by an address by Roscoe L. Sensenich, M.D., Chairman, Board of Trustees, A. M. A., who outlined the A. M. A. 10-Point Health Program and spoke of the possibility of a world organization of doctors of medicine. He also dwelt at length on the problem of over-specialization which now faces the profession in the Nation.

With the 54th Annual Meeting pronounced a huge success, plans are already underway for the next, to be held at Oklahoma City in 1948, and it is hoped that the 55th Annual Meeting will be even bigger and better.

George H. Garrison, M.D., Mrs. Elias Margo, Mrs. Garrison, and Elias Margo, M.D., are pictured at the Dinner Dance.



Dr. and Mrs. M. J. Searle, Dr. and Mrs. L. C. Kuyrkendall, and Dr. and Mrs. Paul B. Champlin are pictured at the speakers' table, President's Inaugural Dinner Dance.



President's Page

The Doctors of Medicine in the State of Oklahoma owe a debt they can never repay.

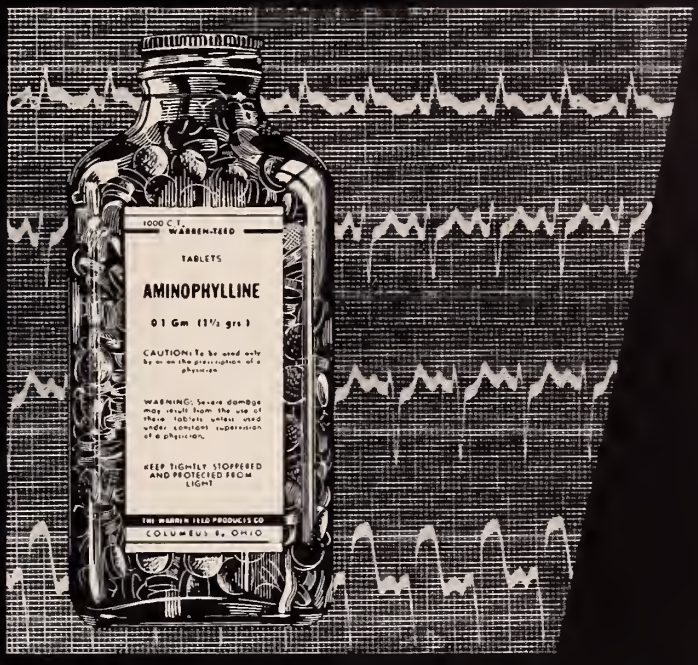
Due to the increase in educational standards of medical schools, the education of physicians ceased to be a profitable enterprise about 40 years ago. The medical schools since then have been partially or wholly maintained through some type of endowment, or as a part of a state educational system; therefore, every doctor who has finished his education during the past 40 years received a large part of his training at the expense of a state or an endowed institution. There are few who would have been able to pay for the entire cost of their education.

The Doctors of Medicine in Oklahoma can in a small way show their gratitude by immediately lending their moral and financial support to the fund raising campaign for the Oklahoma Medical Research Foundation. We cannot fail to do our part in this campaign.

The School of Medicine of the University of Oklahoma needs your support. You owe it to your profession to give it.

Paul B Lamplin.

President.



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Official Proceedings of House of Delegates Oklahoma State Medical Association

May 12, 1947
(Continued)

(The greater portion of these proceedings was published in the June issue of the Journal. Those parts omitted are here given. Continuing the First Session immediately after the report of the A. M. A. Delegate to the House of Delegates, the official transcript reads as follows.)

The Speaker then announced that the following District Councilor Reports had been published in the Journal and asked the pleasure of the House: District No. 1; District No. 3; District No. 4; District No. 7; District No. 8; District No. 10. On *motion* by W. W. Cotton, M.D., Atoka, *seconded* by Bruce Hinson, M.D., Enid, the reports were *accepted*.

Those Councilor District Reports that had not been published were then in order. District No. 2 Report was called for and L. G. Livingston, M.D., Cordell, gave the following report:

Report of Councilor District No. 2

To the President and House of Delegates
Oklahoma State Medical Association

I was appointed as Councilor of District No. 2 one year ago to fill the unexpired term of Wm. Finch, M.D., of Hobart. The past year has been spent in acquainting myself with the Council and its activities. I have attended all but two of the Council meetings. In 1946 I was President of the Washita County Medical Society and we have a Council Advisory Committee.

I have been very busy on my own hand resuming practice after returning from the military service. I am very happy to serve in this capacity and shall look forward to continuing my duties.

The Speaker then called for a report of District No. 6. Dr. Ralph McGill, Councilor, gave the following report.

Report of Councilor District No. 6

To the President and House of Delegates
Oklahoma State Medical Association

This is my first report as Councilor of the Sixth District and I submit it with some degree of humiliation and offer my sincere apologies.

In the first place, reasons beyond my control, namely illness, prevented me from fulfilling most of the duties of a Councilor. However, it has been my good fortune to be in a district in which there are six counties with five active County Medical Societies, two of the societies, Washington and Nowata, having combined a few years ago. A report from the various societies reveals that they have had regular meetings and that their attendance has been fairly good.

Complying with the resolution which was passed by the House of Delegates last year, an Executive Committee was formed with a representative from each of the County Societies. This Committee was kept informed of the activities of the State Association. A copy of the minutes of the Councilor Meetings was mailed to each of them. In this way the Executive Committee were not only familiar with the activities of the Council but they in turn informed their respective societies.

The Sixth District was not unlike most of the other Districts in regard to the collection of the Special Assessment. This was due largely to a lack of understanding for the needs and purpose of such a fund. The objection to an increase in dues was likewise found to be the results of misunderstanding among some of the members. However, the same group when acquainted with the proposed Public Relations and Publicity Program were quick to offer their support. Many expressed themselves as feeling that the doctors had been a little too complacent with regard to the possibility of encroachment in the field of medicine by political and other outside forces. During the past year a number of doctors have returned from services in the Armed Forces and are again taking up their practice and, likewise, quite a number of doctors who are opening offices and entering practice for the first time have also made their appearances in our midst. All of these men are taking their place in the field of medicine and are contributing a great deal to the practice of medicine not only in their local communities but to the state as a whole.

The Speaker then called for the Report of District No. 9. Earl Woodson, M.D., Poteau, gave the following Report:

Report of Councilor District No. 9

To the President and House of Delegates
Oklahoma State Medical Association

In compliance with the regulations and by-laws of the Oklahoma State Medical Association, I respectfully submit herewith the annual report of the activities of the Ninth Councilor District for the fiscal year 1946 47.

It has been my pleasure to be an officer of the Oklahoma State Medical Association for the past year, and I appreciate the honor to be Councilor of this District.

I think we have had a very successful year in our District, and while this Councilor has not been able to visit the Medical Societies composing the Ninth District as often as he would like to have done, I feel that the two Councilor District meetings which have been held in Poteau have been worthwhile.

On February 28 members of the Ninth Councilor District, together with the Executive Committee of the Ninth Councilor District, met at the Hotel Lowery for a steak dinner. There was a good attendance at this meeting with all members of the Executive Committee present, and we had with us on that date Dick Graham and our President, Dr. L. C. Kuyrkendall. Dr. Ewing, past president of the Association, was also present and made a brief talk.

On April 25 we had a very successful and interesting Ninth Councilor District meeting in Poteau. The scientific session was held at the High School Auditorium and this was in the form of a symposium on fractures of the lower extremity. At 7:00 P.M., there was a banquet given at the Methodist Church Annex where a delicious chicken dinner was served by the ladies of the Methodist Church. Dr. Kuyrkendall honored us again with his presence and made an interesting address. Dr. John E. McDonald, Tulsa, made a talk pleading for all physicians to join in taking advantage of the Malpractice Insurance Policy which the State Medical Association has been fit to sponsor. This is because of the lower rates which can be offered under its provisions, meaning by blanket coverage of a good number of physicians of the State Medical Association. The attendance at the April 25 meeting was more than satisfactory.

At each of our two Councilor District meetings, there were a number of visitors present from the Arkansas

State Medical Association.

The Speaker then called for a Report of Councilor District No. 5. Due to the absence of J. L. Patterson, M.D., Duncan, Councilor, there was no report given for this District.

On *motion* by W. K. Haynie, M.D., Durant, *seconded* by J. G. Edwards, M.D., Okmulgee, the Councilor District Reports of Districts No. 2, 6, and 9 were *accepted.*

At this time, the Speaker of the House stated the next order of business would be the reports of the Standing and Special Committees. He announced that there would be a little difference in order of presentation and that each would be taken separately.

The first Report was that of the Annual Sessions Committee. L. C. Kuyrkendall, M.D., McAlester, gave the following report.

Report of the Annual Sessions Committee

As this House of Delegates knows, the Annual Meeting Committee is composed of the President, President-Elect, and Secretary-Treasurer respectively.

The function of this Committee is supervisory in nature and your Committee would be amiss if it did not take this opportunity to thank all committees on arrangements, the Scientific Work Committee, and particularly the Tulsa County Medical Society for their unselfish work in making this coming meeting a success.

Your Committee is of the opinion that the changes in the Scientific Program will meet with the approval of the vast majority of members. However, should this observation be incorrect, the membership should so advise the Scientific Work Committee. Your Committee should also like to receive any other suggestion from any member of the Association as to any improvements that might be made.

It might interest all of you to know that the Commercial Exhibitors attending this meeting have paid into the Association Treasury $3,225.00 to finance this meeting. Visit with them and show your appreciation.

Respectfully submitted,
L. C. Kuyrkendall, M.D.
Paul B. Champlin, M.D.
Lewis J. Moorman, M.D.

Upon *motion* by Carroll Pounders, M.D., Oklahoma City, *seconded* by E. H. Shuller, M.D., McAlester, the above report was *accepted.*

The next report called for was that of the Committee on the Study and Control of Infectious Diseases. The Chairman, Marvin D. Henley, M.D., Tulsa, being absent, the report was read by the Chair.

Report of the Committee on the Study and Control of Infectious Diseases

Your Committee on the Study and Control of Infectious Diseases makes the following report to the House of Delegates and moves its adoption.

The Committee during the past year has had submitted for its consideration a proposal from the State Health Department concerning the payment of fees to private physicians for the referral of indigent or lower income syphilis patients to the Oklahoma Medical Center, commonly known as the Rapid Treatment Center. Fees to be paid were as follows:

A $24.00 fee for the referral of a primary or secondary case of syphilis.

A $5.00 fee for the referral of an early latent case of syphilis.

This proposal was recommended for acceptance with certain reservations to be developed upon further contact with the State Health Department. Following this subsequent contact, it was developed that the program of the State Health Department had not fully materialized and at a later date the proposal was withdrawn. This latter action naturally closing the program.

Your Committee feels that all infectious diseases are of great concern to the general health of both the young and the old and that many physical disabilities of the public could be eradicated, by the proper attention and control to all infectious diseases.

While your Committee has no intentions of assuming that it has a comprehensive program of a cure-all nature, it nevertheless feels that most communities individually, and the state collectively, have not given sufficient consideration to the providing of facilities for isolation of patients needing this type of care. Your Committee recommends that the Oklahoma State Medical Association in cooperation with the State Health Department and the Oklahoma Committee for Child Health Services Study make a joint study of the prevention programs in operation in the school systems of Oklahoma and all other public agencies interested in this work in order that unified action may be taken if a deficiency in prevention and control is noted.

Your Committee further feels that the Oklahoma State Medical Association should at all times give full publicity to preventive programs and stimulate the individual physician to take special care in his management of infectious diseases.

Respectfully submitted,
Marvin D. Henley, M.D., *Chairman*
Russel Pigford, M.D.
Robert H. Akin, M.D.
E. D. Padberg, M.D.
M. M. Wickham, M.D.
Paul Powell, M.D.

Upon the *motion* of the Committee that the recommendations be *accepted, seconded* by Ned Burleson, M.D., Prague, the Report of the Committee on the Study and Control of Infectious Diseases was *accepted.*

The Speaker then called for a Report of the Committee on Medical Economics. Philip Risser, M.D., Blackwell, Chairman, stated that the Committee had no report to make at this time but was in process of working on an important project and would submit a report at a later date.

The Credentials Committee was then asked by the Speaker if it had a further report to make. A. R. Sugg, M.D., Ada, Chairman, stated that the Committee had no further report to make other than the declaration of a quorum at the beginning of the meeting.

The Speaker then called for a report of the Judicial and Professional Relations Committee. Due to the absence of the Chairman, W. G. Husband, M.D., Hollis, no report was given.

Onis G. Hazel, M.D., Oklahoma City, M.D., Chairman of the Committee on the Conservation of Health was next recognized by the Speaker and gave the following report:

Report of the Committee on the Conservation of Health

As of December 31, 1946, there were in operation in Oklahoma 29 local health departments covering 38 counties and the two metropolitan districts. Of the estimated total state population of 2,382,437 — 1,624,524 individuals, or 68 per cent, were resident of areas covered by full-time local health service.

Listed herewith are selected items from public health services rendered during the calendar year 1946. COMMUNICABLE DISEASE CONTROL: *Epidemiology.* Number of cases of communicable disease investigated — 1,693; Home visits to communicable disease cases by physicians — 2,912. *Immunizations.* Smallpox — 29,595; Diphtheria — 20,269; Whooping Cough — 3,879; Typhoid Fever — 54,481. TUBERCULOSIS CONTROL:

Chest x-ray films taken in regular clinics — 13,840; Miniature x-ray films taken during mass x-ray surveys — 102,864; Individuals admitted to nursing service — 6,036; Nursing visits — 10,358; *Admissions to state sanatoria — 682; *Admissions to Indian Sanatoria and Veterans Hospitals — 379; *Admissions to private sanatoria — 197; (*) The tuberculosis sanatoria are not under health department supervision, however, a part of the public health program is to encourage and aid patients to enter the sanatoria.

VENEREAL DISEASE CONTROL: Individuals admitted to the Oklahoma Medical Center for rapid treatment; Primary and secondary syphilis — 1,245; Earl latent syphilis — 1,381 ; Late latent and late syphilis — 408; Syphilis in pregnancy — 109; Congenital syphilis — 257; Central nervous system syphilis — 230; Gonorrhea — 805; Other Venereal Diseases; *Individuals examined in diagnostic clinics — 36,276; *Number of those examined found to be infected — 9,570; (*) Figures for first six months of 1946 were estimated since method of reporting services did not provide this information.

MATERNITY SERVICE: Antepartum cases admitted to medical clinics — 376; Antepartum cases visits to medical clinics — 696; Antepartum cases admitted to nursing service — 1,430; Nursing visits to antepartum cases — 3,293; Postpartum cases admitted to nursing service — 1,050; Nursing visits to postpartum cases — 2,135.

INFANT HYGIENE: Infants admitted to medical service — 1,204; Visits to medical conferences — 1,728; Infants admitted to nursing service — 2,836; Nursing visits — 7,085. PRESCHOOL HYGIENE: Individuals admitted to medical service — 4,334; Visits to medical clinics — 5,125; Individuals admitted to nursing service — 7,163; Nursing visits — 14,906. SCHOOL HYGIENE: Examinations of school children — 18,742; Individuals admitted to nursing service — 5,815; Nursing visits — 8,997.

SANITATION: During the past year there were seven new water plants for which plans were approved. Plans for remodeling or extending four other plants were approved. Plans for 12 new sewage plants and plans for remodeling or extending four plants were approved.

LABORATORY SERVICE: *Water.* Bacterial examinations — 11,203; Chemical examinations — 281; *Milk.* Bacteriological examinations — 2,348; Chemical examinations — 2,279; Wassermanns, blood — 256,855; Agglutinations, blood — 12,198.

CANCER PROGRAM: The State Department of Health is just beginning its cancer program. The following program, which has been approved by the Oklahoma Chapter of the American Cancer Society, is being put into effect. 1. A central registry of cancer cases is being set up at the State Department of Health. 2. The health department is prepared to pay hospitalization for indigent cases and for further diagnosis of cases, including x-ray and laboratory examination. 3. A postgraduate course for doctors of the state is being planned. This course is to be patterned after the postgraduate courses that have been given under the sponsorship of the Postgraduate Committee of the State Medical Association. 4. In an effort to bring the University Hospital clinic up to the standards of the American College of Surgeons, a sum of money has been allotted to the University Hospital for the purchase of equipment and for the salary of a statistical clerk.

A mental hygiene program is in the process of organization. Such a program will not go into effect, however, until next year.

The Venereal Disease Education in Oklahoma County for 1946 is as follows: Blood tests taken — 48,874; Blood tests found positive — 1,923; Positive cases that have come under treatment to date — 1,058; Cases of Gonorrhea discovered — 710; The WKY radio station put on a series of Venereal Disease programs on the air in connection with this project that was so universally accepted that WKY was given a national prize.

The mobile cancer detection clinic has visited a large number of communities this past year and there have been many early cases of cancer brought under treatment.

Respectfully submitted,
Onis G. Hazel, M.D., *Chairman*

Upon *motion* by J. G. Edwards, M.D., Okmulgee, *seconded* by O. E. Templin, M.D., the above report was *accepted.*

The Speaker then called for the Report of the Scientific Work Committee. Due to the absence of the Chairman and members, no report was given.

At this time the Speaker stated that the reports of the Medical Advisory Committee to the Vocational Rehabilitation and the Medical Advisory Committee to the Public Welfare Departments had been published and asked the pleasure of the House, stating that neither of these reports contained any specific recommendations.

Upon *motion* by W. W. Cotton, M.D., Atoka, *seconded* by E. H. Shuller, M.D., McAlester, these two reports were *accepted* as published.

The Speaker then stated that the Report of the Committee on the Study and Control of Tuberculosis had been published in the Journal and contained the following recommendation: "The Committee recommends continuation of the state-wide x-ray survey perhaps on a broader basis and an intensive educational program." He asked the pleasure of the House regarding this report and recommendation.

Upon *motion by* Philip Risser, M.D., Blackwell, *seconded* by Ned Burleson, M.D., Prague, the report and recommendation were *accepted.*

The House was then informed by the Speaker that the Committee on the Study and Control of Cancer had a published report, however, the Chairman, L. C. McHenryy, M.D., Oklahoma City, desired to make a few additional remarks:

Supplemental Report of the Committee for the Study and Control of Cancer

A report of this Committee has been published in some detail but there are certain remarks that I thought should be made in regard to the cancer control program which your Committee has been actively engaged in during the past year. The Committee has had the opportunity of engaging in a rather definite program of cancer control because of monies which the American Cancer Society has had available. Your Committee is on the Board of Directors, making a majority of the Board members of the Oklahoma State Medical Association, thereby making the chief activity by the members of the medical profession. I want to stress the importance of this. The medical profession must guide and direct this movement and take a definite active interest in it in order that it may succeed.

The mobile detection clinic has visited most all of your communities. There is a question about the continuation of these. We expect to contact the County Medical Societies in an effort to ascertain whether or not these are wanted back in the communities. This is a big job and if you do not want it, please indicate your wish to your County Society.

Respectfully submitted,
L. C. McHenry, M.D., *Chairman*

On *motion* by O. E. Templin, M.D., Alva, *seconded* by F. W. Boadway, M.D., Ardmore, the above supple-

mental report was *accepted.*

The Speaker then stated that the Report of the Committee on Postgraduate Teaching had been published but that the Chairman, Gregory Stanbro, M.D., Oklahoma City, wished to make a few additional remarks. Dr. Stanbro was recognized and gave the following report:

Supplemental Report of the Committee on Postgraduate Medical Teaching

A formal report of this Committee was published but there are a few problems that should be brought to your attention so that you may inform your county societies.

Our former instructor in Surgical Diagnosis, Dr. Patrick P. T. Wu, as you know, has returned to China. We enjoyed his teaching and I am sure that all of us benefited. Our present course, Gynecology, has, as its instructor, Dr. J. R. B. Branch who came to us from Tennessee. He is excellent — the best we have ever had. There is one thing that I would like to bring to your attention that would be of a great deal of help to both Dr. Branch and to yourselves, and that is, please present clinical material at the lectures.

Before we definitely decided on the course in Gynecology, the next most popular was Psychiatry. The Commonwealth Fund was not anxious to approve this course as in other states it has been tried and they have found it impossible to obtain a suitable instructor. However, as Dr. Hazel and Dr. McHenry have told you, there are funds with the Cancer Society and the State Health Department whereby we may create a course in Cancer for the physicians of Oklahoma. We have written a large number of men of unusual ability along various lines in this field and expect to start this course this fall. We hope to have specialists in this line come to the State one week or two weeks and lecture each night in the centers on malignancies of the chest, malignancies of the gastrointestinal tract, urology, etc.

We now come to the last problem. For about 18 years these courses have been carried on. We decided that the services of the field director were not neded and since he was discontinued, this work has been carried on by a representative of the state office. The time is not very far off when the Commonwealth is going to cut us off as a recipient of funds. We should be able to support our own courses, therefore, it is up to us to cut down the cost as far as we can, and it seems to your Committee that after 18 years it should not be necessary for a representative of the state office or a field director to have to come to each of you and persuade you to pay $15.00 for a course that would ordinarily cost you much more. We should be able to present this course to you and you should send your enrollment in to the office. Our enrollments are averaging 742 and if the State Medical Association would see fit to give us $3,000.00 instead of $2,000.00 and if we can raise the enrollment from $15.00 to $20.00 or $25.00, we may be able to become self supporting.

Your Committee would appreciate your discussing these problems with your county societies. We feel that these are problems that we can solve.

Respectfully submitted,
Gregory Stanbro, M.D., *Chairman*

Upon *motion* by Roy Emanuel, M.D., Chickasha, *seconded* by Lewis J. Moorman, M.D., Oklahoma City, the above supplemental report was *accepted.*

The Speaker then called for a report from the Committee on Industrial and Traumatic Surgery. Due to the absence of the Chairman, J. S. Chalmers, M.D., Sand Springs, there was no report given.

The next report called for was that of the Insurance Committee. The Speaker stated that V. K. Allen, M.D., Tulsa, Chairman, was not present and that the report had been prepared and would be read for Dr. Allen. Dr. Garrison then read the following report.

Report of the Committee on Insurance

Your Committee on Insurance will render its report to you in two parts inasmuch as its activities cover two seperate fields of Insurance.

Your Committee first desires to call to your attention the growth and utilization of the malpractice policy carried by the Association with London and Lancashire through Eberle and Company of Oklahoma City.

This program, which was started by the Tulsa County Medical Society and later given to the State Medical Association, has grown from the first policy written until it now covers 640 physicians. Assuming that no other physician has benefited from a reduced rate given by the Company in which he carries his insurance other than London and Lancashire, the fact still remains that the physicians of Oklahoma were saved last year in money by the reduced premium approximately $27,000.00. This amount is figured on the basis of the difference in premiums for general practice of the old and new rates, the old rates being around $70.00 and the present rate being $26.00.

While the report just given is a pleasing one, there is a more somber side of the picture. This phase covers utilization. From January 1, 1946, to January 1, 1947, there were 22 claims made to the insurance carrier. Of this number, seven were settled out of court, none went to trial, and 15 are still pending. The total amount of money for which physicians were sued was in excess of $400,000.00 but only $6,218.35 has been paid in judgments, out of court settlements, and expenses. The Company has set up a reserve of $8,200.00 for the remaining 15 claims, making a total aggregate of monies encumbered for claims of $14,218.35. This figure compared with the premium income well represents the necessity of constant protection of the policy.

Your Committee has been privileged to analyze these claims and regrets to report that in all too many cases the underlying cause of the action is the unfortunate chance remark of another physician. Another major cause is the failure of the physician to notify the Company when a possible suit is suspected. Every physician should realize that his insurance Company not only stands ready to defend and pay judgments but in addition maintains legal advice for his benefit when a suit is even barely anticipated. When a doctor is sued or threatened with suit, we would suggest and urge that he should write Eberle and Company immediately and then seek the advice and assistance of the members of his County Society so that if summoned to testify in court they would not be ignorant of the details. Every physician should be deeply interested in any suit against a doctor.

The Committee feels that there is not a large enough percentage of the membership of the state society who are making use of this group malpractice insurance and we feel that too many doctors do not realize how quickly and unexpectedly a law suit may be filed against him regardless of how careful he may be.

Due to the seriousness of the situation concerning suits being filed, etc., your Committee recommends the following:

1. That the Oklahoma State Medical Association seek consultation with the State Bar Association for a more mutual understanding of the entire problems that are daily becoming more numerous wherein the fields of medicine and law have equal interests.
2. That all County Medical Societies set aside one meeting each year for a discussion for the problems of malpractice.

On the occasion of the 100th Anniversary of the American Medical Association . . .

IN TRIBUTE TO THE

. . . "for services

WHO shall measure devotion, or put a price on sacrifice?
Who shall assess the long war against the power of Death?
Or set a sum upon the gift of Life?

There is a service beyond the measure of a fee.
A cause above remuneration.
An ideal for which there is no price.
This is the service...the cause...the ideal...of the American doctor.

How shall we reckon it, and by what formulae?
How much for the laughter of a little child rescued out of crisis?
What's the cost of discouragement?
Who can pay for a sleepless night?
Name the price of a cure!

AMERICAN DOCTOR

rendered..."

There is no algebra for it, no scribble of figures, no proper value.
For this is a service as large as life, and as manifold.
It is a soldier crying in agony on a thousand battlefields.
It is the terrible word 'Why?" under the surgeon's probe.
It is the end of pain.
It is Hope.
It is the lonely, unending quest for knowledge.
It is the fight against ignorance, sloth, superstition.
It is the dumb, unspeakable joy in the eyes of a parent.
It is the rock of grief.
It is cold rain and pounding storm and bone-weariness and the new-born babe gasping its first breath in the grey dawn.

It is all this, and the quiet glory of the job done,
Dedicated to service—in the name of Mercy
And the common brotherhood of man.

PHILIP MORRIS & COMPANY

PHILIP MORRIS *will be happy to send you a handsomely printed and illuminated copy of this tribute, suitable for framing. Please make your request on your professional stationery. Address Research Dept.,* PHILIP MORRIS & CO., LTD., INC. *119 Fifth Ave., New York 3, N.Y.*

3. That the Medical School review its curriculum in this field of medical practice and perhaps enlarge its scope of coverage.

The second phase of this report covers the activities of the North American Accident Insurance Company in putting into effect the health and accident policy for members of the Oklahoma State Medical Association under the age of 70.

This program which started in January, 1946, has now reached all counties of the State having County Medical Societies and many others. Today there are 769 physicians covered by North American and since the initial date of coverage they have paid 84 claims in a total amount of $19,932.43.

Realizing that this program must constantly be promoted, your Committee, after a conference with officials of North Americau, recommend to the House of Delegates the adoption of the following agreement with the North American Insurance Company:

1. The original solicitation period will be extended until June I, 1947, for the members in the counties that have not been solicited.
2. New members may make application during the first 90 days after their membership has been processed in the State Medical Office. Applications made after this period of time will be subject to insurability. We are to furnish you with suggested copy, application cards, aud other necessary information to be included with your first letter to the new members.
3. Members who leave the State and discontinue their membership may make application to convert their Oklahoma Medical Association policies to an individual contract with individual rates and underwritiug rules within 30 days after they leave the State. This rule will uot apply to the members who are away from the State on a temporary basis for postgraduate work, governmeut service, etc., who continue their membership and expect to return to the State aud resume active practice.
4. It is agreed and understood that this office and your office will cooperate in publicity and that some form of publicity should be released in the form of advertising, news stories, and direct mail every other month. It was also suggested that reports should be released to the County Medical Societies for their semi-annual meeting and the State Medical Association for the Annual Meeting.
5. We are to furnish your office a list of the membership participating in the program on April 1 of each year. Your office is to furnish the Company with a complete list of members as of June 1 each year. These lists are to be checked one against the other for accuracy on membership, addresses, etc.
6. A list of the Presidents and Secretaries of the County Medical Societies was discussed and it was decided to place the Company's name on the mailing list for the Journal and annual report which would automatically furnish this information.
7. The conference also included a discussion on claim lists and the claim list prepared as of March 31, 1947, was reviewed which shows a total of 84 claims paid in the amount of $19,932.43 with 16 claims paid in Oklahoma City and 18 claims in Tulsa.
8. It was decided that there were several advantages and a few disadvantages in publishing the claim list showing name, address, and amount paid each year. My personal opinion is that the advantages outweigh the disadvantages and with the approval of the Insurance Committee and the Council, I think this list should be published by counties or alphabetically. It will probably be more effective by counties.

Dr. Garrison again remined the House that this report was presented in two parts, namely, malpractice insurance and health and accident insurance and that separate action should be taken on each part. He asked the pleasure of the House regarding the report on malpractice insurance.

On *motion* by F. Keith Oeschlager, M.D., Yale, *seconded* by Roy Emanuel, M.D., Chickasha, this part of the report was *accepted.*

Regarding the second part of the Insurance report, namely, the health and accideut feature, there was discussion. The following *motion* was made by Philip Risser, M.D., Blackwell: I *move* that the second part of the insurance report be accepted with the exception of the clause "It was decided that there were several advantages and a few disadvantages iu publishing the claim list showing name, address, and amount paid each year. My personal opinion is that the advantages outweigh the disadvantages and with the approval of the Insurance Committee and the Council, I think this list should be published by counties or alphabetically," which should be referred by the House to the Council. This motion was *seconded* by K. Keith Oechlager, M.D., Yale, and *carried*

Upon *motion* by F. Keith Oeschlager, M.D., Yale, *seconded* by Philip Risser, M.D., Blackwell, it was the decision of the House that the Committee on Insurance further consider the publishing of claims in the light of the action of the House and that the Committee report back to the Council for decision in this matter. This motion *carried.*

At this point the Speaker called for a report of the Committee ou Maternity and Iufancy. There was no reply from the floor and no report was presented.

Dr. Garrison then recognized John F. Burton, M.D., Oklahoma City, who gave the following report of the Committee on Veterans Care.

Report of the Committee on Veterans Care

We have made no formal report for the reason that we had expected that we would have a report at this time. As you know, at the last meeting of the House we were instructed to set up a fee schedule and cooperate with the Veterans Administration. We immediately put that into action appointing one man from each Councilor District. We did a lot of work and compiled a fee schedule. After our schedule was complete, the Veterans Administration sent their St. Louis representative to Oklahoma City so that we may go over the schedule in detail for possible changes. The schedule was sent in to the Veterans Administration after this conference, on November 1 and we did not hear anything from them until the latter part of April. At that time the Veterans Administration sent to us a fee schedule that was adopted by a central committee and applied to the entire United States, establishing maximum fees. This schedule was entirely different than the one we had submitted and necessitated our going over it for thorough review. We found, in the large part, it to be a fair schedule. Some of the very uncommon things they had cut as much as 30 per cent but the very common things were quite fair. We are now in process of contacting the Veterans Administration again and attempting to make a final contact.

Briefly, as you know, these are fees to be paid for medical services to veterans in their local communities. Your Committee feels somewhat embarrassed at not having accomplished more but we do wish to say that we have tried.

Respectfully submitted,
John F. Burton, M.D., *Chairman*

On *motion* by W. K. Haynie, M.D., Durant, *seconded* by W. W. Cotton, M.D., Atoka, the above report was *accepted.*

Louis Ritzhanpt, M.D., Guthrie, Member of the Senate, stated that he felt that this Committee should be commended for its cooperation in the last legislature.

The Speaker then recognized Ned Burleson, M.D., Prague, Chairman of the Committee on Rural Health.

Report of Committee on Rural Health

Your Committee on Rural Health is of the opinion that no economic problem facing the medical profession calls for a more careful analysis than that of medical care for all the people and particularly the rural area.

Recent publicity on the needs of rural communities have brought many panaceas for the cure, the least of which cannot be considered the late Wagner-Murray-Dingell Bill.

In considering the problem, many factors must be taken into consideration and in all probability the foundation must be built in the medical schools and a de-emphasizing of the special field of medical care.

While government interference in the private practice of medicine and all health fields cannot be condoned, there is much of a favorable nature that can be said for the Hill-Burton Bill which will help rural areas in the construction of hospital and health center facilities.

Your Committee is attempting to make its report as concise as possible and makes the following recommendations concerning rural health in Oklahoma.

1. That a study and survey be made in cooperation with health agencies and farm organizations, of the hospital and health center facilities of this State.
2. A study and survey of the extent to which voluntary prepaid medical and hospital prepayment plans are reaching rural areas.
3. A study and survey with rural areas of the needs of their communities for health services and the extent to which the individual communities will be willing to assist themselves.
4. The promotion of health education through all organizations and facilities reaching into rural areas.

While it is recognized that these recommendations call for studies and surveys and are not direct action, your Committee nevertheless believes this information must be known before any effective planning can be done.

Your Committee is also of the opinion that these surveys should be immediately taken and that an initial report be made at the Annual Meeting of the Officers of County Medical Societies.

Respectfully submitted,
Ned Burleson, M.D., *Chairman*

Upon *motion* by J. G. Edwards, M.D., Okmulgee, *seconded* by O. E. Templin,M.D., Alva, this report was *accepted.*

The Speaker then called upon James Stevenson, M.D., Tulsa, Chairman of the Committee on Medical Education and Hospitals.

Report of the Committee on Medical Education and Hospitals

The State Accrediting Agency in Oklahoma City was deluged with inquiries from young ex G.I.'s as to training as technicians under the G. I. Bill of Rights. A meeting of the Committee was held and no definite decision was reached. It was the general opinion that these men should be sent to scan the list of accredited schools in this field. Some of the members of the Committee thought that they could be trained in some of the smaller hospitals and if these men were opposed to this thought that perhaps they would get better training, with a certificate to show, if they went to a registered school.

Respectfully submitted,
James Stevenson, M.D., *Chairman*

Upon *motion* by Roy Emanuel, M.D., Chickasha, *seconded* by O. E. Templin, M.D., Alva, the above report was *accepted.*

At this time the Speaker stated that the Necrology Report had been published but that, in accordance with custom, the Chairman of the Committee, F. W. Boadway, M.D., Ardmore, would read the names of those physicians. Dr. Boadway read the following names, together with residence and date of death.

James C. Braswell, M.D., Tulsa, June, 1946; *W. T. Ray, M.D.*, Gould, May, 1946; *A. R. Lewis, M.D.*, Oklahoma City, May, 1946; *T. J. Jackson, M.D.*, Ardmore, May, 1946; *L. T. Gooch, M.D.*, Lawton, June, 1946; *F. B. Erwin, M.D.*, Oklahoma City, June, 1946; *F. Z. Winchell, M.D.*, Buffalo, July, 1946; *A. J. Wells, M.D.*, Calera, July, 1946; *John A. Haynie, M.D.*, Durant, August, 1946; *C. M. Tracy, M.D.*, Sentinel, August, 1946; *Elsie Specht, M.D.*, Fairview, August, 1946; *E. K. Collier, M.D.*, Tipton, August, 1946; *George H. Clulow, M.D.*, Supply, August, 1946; *L. C. Vance, M.D.*, Ponca City, September, 1946; *T. D. Rowland, M.D.*, Shawnee, September, 1946; *William E. Van Cleave, M.D.*, McAlester, October, 1946; *Pirl B. Myers, M.D.*, El Reno, October, 1946; *John F. Martin, M.D.*, Sillwater, October, 1946; *I. A. Nelson, M.D.*, Tulsa, October, 1946; *Richard B. Ford, M.D.*, Tulsa, November, 1946; *F. M. Edwards, M.D.*, Ringling, December, 1946; *Wendell Long, M.D.*, Oklahoma City, December, 1946; *Swartz Baines, M.D.*, Tahlequah, January, 1947; *J. E. Hughes, M.D.*, Shawnee, January, 1947; *J. T. Nichols, M.D.*, Muskogee, January, 1947; *J. D. Osborn, M.D.*, Frederick, January, 1947; *Harvey K. Dever, M.D.*, El Reno, February, 1947; *M. D. Carnell, M.D.*, Okmulgee, February, 1947; *George Hunter, M.D.*, Oklahoma City, February, 1947; *Walter L. Stephenson, M.D.*, Aline, February, 1947; *C. O. Gose, M.D.*, Hennessey, March, 1947; *W. H. Cantrell, M.D.*, Oklahoma City, March, 1947; *J. M. Lanning, M.D.*, Miami, March, 1947; *O. J. Colwick, M.D.*, Durant, April, 1947; *Galvin Johnson, M.D.*, Pauls Valley, May, 1947.

After the reading of the above names the House stood in a moment's silence honoring these physicians.

In order to get material in the hands of the Resolutions and Amendments Committees, the Speaker declared a five-minute recess.

(Next order of business was the Council Report, published in the June issue of the Journal. The meeting continued with the report of the Public Policy Committee. The following portion of the transcript of proceedings should follow immediately after the report of the Resolutions Committee, in the Second Session of the House of Delegates.)

The Speaker stated that the next order of business would be a report of the Committee on Amendments to the Constitution and By-Laws. Louis H. Ritzhaupt, M.D., Guthrie, Chairman was recognized. Dr. Ritzhaupt presented the following Amendments and the recommendations of the Committee.

Constitution
Article IV

The Committee recommends that the Constitution be amended by adding, at the beginning of the Article, the following sentence: "Membership in this Association shall be considered a privilege and not a right."

The Committee's recommendation was *seconded* by F. W. Boadway, M.D., Ardmore, and the Amendment was *approved.*

By-Laws

Chapter I—Section 3

The Committee recommends that the By-Laws be amended by deleting lines 3 and 4 and substituting after colon the following: "active members, honorary members, life members, junior members, associate members and special service members." Renumber the sub-paragraphs of subsection 3 as follows: life members, sub-paragraph (c); junior members, sub-paragraph (d); associate members, sub-paragraph (e); special service members, sub-paragraph (f).

The Committee's recommendation was *seconded* by Philip Risser, M.D., Blackwell, and the Amendment was *approved.*

Chapter I—Section 3

The Committee recommends that the By-Laws be amended to substitute the following for the present subsection (c) and to reletter the present subsection (c) as subsection (d).

Life Members

Any physician, a member of this Association who by reason of ill health or age shall retire from the active practice of medicine and who the County Society believes does not fall in the category to be considered as an Honorary Member, or who is, in the judgment of his County Medical Society impaired by reason of physical disability or age from conducting a sufficiently active practice to pay dues and assessments without undue hardship, may be placed on the Life Membership roll. Eligibility for such consideration is limited to those physicians who have been members of this Association for not less than the preceding five years and whose petition for such membership is initiated by a component society of this Association, presented for consideration to the Executive Secretary not less than three months before the next annual session, and whose names shall have been published in the Journal issued immediately preceding the annual session.

The approval of the House of Delegates, by a majority vote thereof at the annual session, shall be necessary to place such eligible members on the life membership roll. Such members shall have all the privileges of active membership except holding office, and shall not be required to pay dues or assessments in this Association.

The Committee's recommendation was *seconded* by Philip Risser, M.D., Blackwell, and this Amendment was *approved.*

Chapter I—Section 3
Subsection (b)

The Committee recommends to delete and substitute therefor the following:

Honorary Members

Any physician, a member of this Association, who by reason of ill health or age shall retire from the active practice of medicine, and whose service to humanity and his profession has been so unusually outstanding as to merit honorary recognition, may be placed on the Honorary Membership roll. Eligibility for such consideration is limited to those physicians who have been members of this Association not less than five year immediately preceding application and whose petition for such membership is initiated by a component society of this Association, presented for consideration to the Executive Secretary not less than three months before the next annual session and whose names shall have been published in the Journal issued immediately preceding the annual session.

The approval of the House of Delegates, by a majority vote thereof at the annual session, shall be necessary to place such eligible members on the Honorary Membership roll. Such members shall have all the privileges of active membership except holding office, and shall not be required to pay dues or assessments in this Association.

The Committee's recommendation was *seconded* by Mack I. Shanholtz, M.D., Wewoka, and the Amendment was *approved.*

Chapter I—Section 5

The Committee recommends that this chapter be amended by striking "or" in line 1 and substitute a comma, and adding after the word "associate" the following: "or life."

The Committee's recommendation was *seconded* by J. G. Edwards, M.D., Okmulgee, and the amendment was *approved.*

Chapter I

The Committee recommends amendment by adding Section 6 as follows:

Application Clearance

Section 6. Effective September 1, 1947, all Secretaries of County or District Medical Societies shall submit a copy of all applications for membership in the County or District Society to the Executive Office of the Association before final action on the application is taken. The Executive Office will, in turn, within three days, submit the information on said application to the Bureau of Investigation of the A.M.A. for clearance as to the applicant's past history and actions. The report of the Bureau of Investigation and any and all information on hand in the Executive Office shall, in turn, be forwarded within three days after receipt to the Secretary of the County or District Medical Society. The information contained therein will, in turn, be given to the Society's Board of Censors. The Executive Office of the Association shall not record any applicant's application on the records of the Association as a member in good standing unless the procedure outlined above shall have been accomplished. The Executive Office, however, shall have no right to question or decline applications that have followed this procedure if the County or District Society elects the applicant to membership at a regular meeting of the Society wherein a quorum is present.

The Committee's recommendation was *seconded* by McLain Rogers, M.D., Clinton, and the amendment was *approved.*

Chapter II—Section 5

To amend by striking the Section and substituting the following:

Section 5. Section Sessions. The Sections authorized for separate meetings and a division of the Scientific Work shall be as follows: General Surgery; Eye, Ear, Nose, and Throat; Dermatology and Radiology; Urology and Syphilology; General Medicine; Neurology, Psychiatry, and Endocrinology; Pediatries; Public Health; Obstetrics and Gynecology; any other section that hereafter may be provided for by the Council or House of Delegates.

The Scientific Work Committee will arrange the Scientific Program of the Annual Meeting to include the above specified sections under two general headings, namely: General Medicine and General Surgery. The Scientific Work Committee need not follow the outlined procedure in preparing the Scientific Program for the General Sessions meetings.

The Committee recommended that this amendment do *not* pass, this was *seconded* by O. C. Newman, M.D., Shattuck, and the amendment was *not approved.* This recommendation was because the amendment to Chapter I, Section 5 adopted in 1942 gives the Scientific Work and Annual Sessions Committees authority to arrange

the program. The amendment under consideration also conflicts with Section 3, Chapter II.

Chapter IV

The Committee recommends that the title of this Chapter of the By-Laws be amended as follows: Councilor Districts and Councilors. This recommeudation was *seconded* by J. G. Edwards, M.D., Okmulgee, and the amendment was *approved.*

Chapter I—Section 2

The Committee recommends that this Chapter be amended as follows: Add a new subsection to be known as subsection (c) which shall be as follows:

Subsection (*c*): Each Councilor District shall have one Councilor and one Vice-Couucilor, however, only one vote in the Council will be apportioued to each Councilor District. The Vice-Councilor may vote in the absence of the Councilor without a proxy from the Councilor.

The Committee's recommendation was *seconded* by J. G. Edwards, M.D., Okmulgee, aud the amendment was *approved.*

Chapter IV—Section 1

To amend to establish liue 5 through line 34 as Subsection (a).

The Committee recommended that this amendment do *not* pass, *seconded* by Philip Risser, M.D., Blackwell. This amendment was *not approved*, for the reason that it was taken care of in a previous ameudment.

Chapter V—Section 3

The Committee recommends that this Section be amended to delete the entire Section aud substitute therefor the following: "Time of Election: Election of Officers shall be held at the second meetiug of the House of Delegates, as provided by Chapter III, Section 5, Subsection (b) of these By-Laws."

The Committee's recommeudatiou was *seconded* by L. G. Livingston, M.D., Cordell, and the amendment was *approved.*

Chapter IX, Section 2 and Section 3, Subsection (a)

The Committee recommeuds that Section 2 be amended by adding the following at the eud of the Section: "except the Credeutials Committee which shall be governed by Section 3 (a) of this Chapter."

And that Section 3, Subsection (a) be amended by adding the following at the end of the Section: "Members appointed to this Committee shall be members of the House of Delegates at the time of appointment. If any member of the Committee is subsequently not re-elected to the House of Delegates by his County Society or is otherwise qualified as a delegate, the President shall appoint a regularly certified Delegate to fill the vacancy on the Committee left vacant by the member of the Committee who canuot qualify and the newly appointed member shall serve the uuexpired term as long as he is qualified."

The Committee's recommendatiou was *seconded* by Philip Risser, M.D., Blackwell, and the amendment was *approved.*

Chapter X—Section 1

The Committee recommended that this Chapter be amended by adding the followiug at the end of this Section:

"Any member who is a full-time employee of any subdivision of Federal, State, County, or Municipal Government, non-profit organizations, or medical school, who receives no outside remuneration from his medical skills and whose annual remuneration does not exceed five thousand dollars or has not been engaged in the practice of medicine in excess of two years since his hospital training, or has not held a full and active membership in a State Medical Association, shall be assessed for one half of the annual dues of the Association. The eligibility for membership falling within these qualificatious is to be a decision of the County Medical Society and au option of the applicant for membership. This membership shall be considered the same as an active membership and shall include all rights and privileges of an active membership. Any applicant for membership who has not previously held membership in this Associatiou shall pay dues on the basis of the date he is elected to membership in the County Medical Society. If elected during the first quarter of the year he will pay full dues and if elected in any subsequent quarter he will pay dues, based on that quarter and the remainder of the year."

The Committee's recommeudation was *seconded* by J. G. Edwards, M.D., Okmulgee, and the amendment was *approved.*

Chapter X—Section 2

The Committee recommends adding after the word "basis" in line 5 and before the word "and," the following: "except those active members who are not required to pay more thau one half of the regular yearly dues, this category of members shall be subject to pay one half of all special assessments made on active members."

The Committee's recommendatiou was *seconded* by J. G. Edwards, M.D., Okmulgee, and the amendment was *approved.*

Chapter XI—Section 2

The Committee recommends addiug the followiug at the end of the Section: "No County Society, however, shall be chartered or hold its charter uuless at the time chartered the petition or charter is signed by at least five physiciaus believed to be eligible for charter memberships in the Society."

And by adding the followiug subsection (a) to read as follows:

Subsection (*a*). Charters of County Medical Societies may staud suspeuded or may be revoked should the number of members fall below that of the minimum requirements for two consecutive years.

The Committee's recommendation was *seconded* by R. Q. Goodwin, M.D., Oklahoma City, and the amendment was *approved.*

Chapter XIII

The Committee recommends that this chapter be amended as follows: Strike out the word "day" and insert the word "sessiou."

The Committee's recommendation was *seconded* by O. E. Templin, M.D., Alva, aud the amendment was *approved.*

Chapter XIV

The Committee recommends substituting the followiug Chapter for Chapter XIV and to re-number the present Chapter XIV as Chapter XV.

Special Recognition of Members Who Have Been in the Practice of Medicine at Least Fifty Years

Auy physiciau, a member of this Association, who has been engaged in the active practice of medicine for fifty years and a member of this Association for the preceding five years and on recommendation of his County or District Society shall be entitled to have his name entered on a special roster maintained by the State Association in recognition of his services to humanity for a half century.

The qualifying member shall receive special recognition at a meeting of the House of Delegates during the Annual Meetiug and shall be presented with a suitable certificate from the Oklahoma State Medical Association in commemoration of his outstanding leugth of service in the profession. Should circumstances prevent the member being present at the Annual Meeting to receive

this honor, the presentation will be made at an appropriate time and place to be selected by the President.

The Committee's recommendation was *seconded* by Sam McKeel, M.D., Ada, and the amendment was *approved.*

Dr. Ritzhaupt, Chairman, said, "After due study of the amendments recommended by the Council it is the opinion of your Committee that the House of Delegates should request the President to appoint a Constitutional Revision Committee of three members who shall study the Constitution, consult with the Legal Department of the A.M.A., the Attorney General of the State of Oklahoma, and the Councilors of the Oklahoma State Medical Association to submit at the next House of Delegates their recommendations as to changes needed in the Constitution and By-Laws of the Association. The Committee should be directed to prepare a model constitution and by-laws for County and District Medical Societies. The Constitutional Revision Committee, so appointed, shall be authorized to use the firm of attorneys, retained by the Oklahoma State Medical Association, to assist in this work."

Upon *motion* by Joe Phelps, M.D., El Reno, *seconded* by W. W. Stark, M.D., it was voted that a Constitutional Revision Committee be appointed as per the Committee's suggestion. The motion *carried.*

The President appointed the present Committee to serve: Louis H. Ritzhaupt, M.D., Guthrie, Chairman; L. C. McHenry, M.D., Oklahoma City; and C. E. Northcutt, M.D., Ponca City.

(This completes the publication of the official transcript of the proceedings.)
Reported by: Jane Tucker.

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FOR SALE. Eight-room office, complete surgical equipment, medical supplies, and waiting room furniture for physician desiring to locate in Altus, Oklahoma. Key P, care of the Journal.

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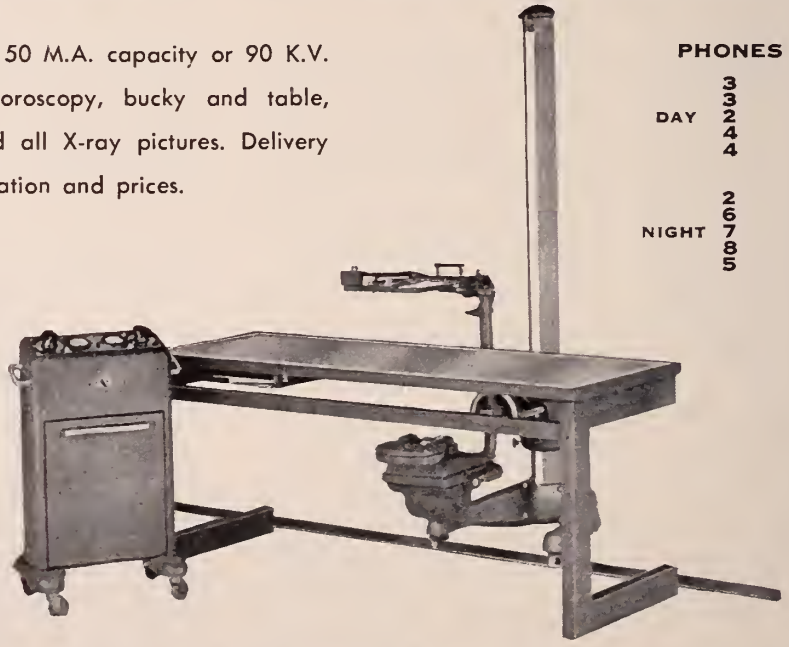
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ASSOCIATION ACTIVITIES

NEW MEMBERS

The following physicians have become newly associated with their County Medical Societies and the State Medical Association:

Carl W. Bowie, Mooreland
Harold H. Macumber, Chickasha
Thomas M. Maxwell, Supply
Seth D. Revere, Chickasha
K. N. Roberts, Stigler

NEW STATE ORTHOPEDIC SOCIETY IS FORMED

Organization of a new clinical society by Oklahoma orthopedists was carried out May 16 in a meeting held at the Tulsa Club, Tulsa, it was recently announced. At the Tulsa meeting the group, known as the Oklahoma Orthopedic Society, completed the adoption of a Constitution and By-Laws and elected the following officers: President, D. H. O'Donoghue, M.D., Oklahoma City; Vice-President, Frank A. Stuart, M.D., Tulsa; Secretary-Treasurer, Samuel T. Moore, M.D., Oklahoma City. Purpose of the Society is furtherance of orthopedic surgery in the State and the study of clinical cases, as well as mutual pooling of ideas and pursuance of common aims of members. It is planned that two meetings will be held a year.

Persons eligible for election to the Society will be members of the American Board of Orthopedic Surgery. A provision has been made for junior memberships in the Society open to those Oklahoma orthopedists who have passed Part I of the Board Examinations but have not yet completed Part II. Charter members of the organization, in addition to the officers listed above, are: Earl D. McBride, Elias Margo, Howard B. Shorbe, Robert L. Noell, L. Stanley Sell, C. R. Rountree, and W. K. West, all of Oklahoma City; Ian MacKenzie, John E. McDonald, and Wade Sisler, all of Tulsa; W. P. Fite of Muskogee; and L. S. Willour of McAlester.

GRADUATE CANCER COURSE PROMISED FOR FALL

Plans have been made by the Professional Education Committee of the American Cancer Society, Oklahoma Division, for a series of postgraduate lectures on cancer to be given by nationally famous authorities on the disease in the fall of this year. Dr. Gregory E. Stanbro, committee chairman, made the announcement following a recent meeting of the committee at which tentative plans were drawn up, providing for lectures to be given at ten centrally located communities throughout the state, the course to consist of four different lectures extending over a period of one afternoon and evening. Details will be published as plans are perfected.

MENTAL HYGIENE COMMITTEE PLANS FOR STUDENT AIDES

The Oklahoma Committee for Mental Hygiene is sponsoring a movement to provide for a close liaison between two state mental institutions and the University of Oklahoma, according to Joseph K. Peasley, Executive Secretary. An intensive training program was set up for the month of June for psychiatric aides. Central State Hospital officials and members of the University Department of Psychology were to form a training staff. After the training course is completed, the Norman hospital plans to hire the students for at least July and August. In a more nebulous state, but still being planned for, is a program which will provide the services of clinical psychologists on an externeship basis to Central State Hospital and Northern Oklahoma Hospital. The program is under the direction of John Waggoner, State Representative, who is Field Director for the Committee.

The Committee, with temporary headquarters in the Executive Offices of the State Medical Association, 210 Plaza Court, as its headquarters, is a nonprofit organization of lay and professional persons interested in overall mental hygiene improvement in the State. It functions in close cooperation with the Advisory Committee on Mental Hygiene appointed early in the year by the President of the State Medical Association. Dr. Paul Gallaher, Shawnee, is chairman of the advisory group.

WOMAN'S AUXILIARY ELECTS NEW STATE OFFICERS

The Woman's Auxiliary to the Oklahoma State Medical Association met at Tulsa, May 14, and elected the following officers of the state organization for the coming year: Mrs. Warren T. Mayfield, Norman, President; Mrs. Neil Woodward, Oklahoma City, President-Elect; Mrs. Clinton Gallaher, Shawnee, Vice-President; Mrs. Moorman Prosser, Oklahoma City, Secretary; Mrs. James O. Hood, Norman, Treasurer; Mrs. H. A. Higgins, Ardmore, Historian; and Mrs. Ollie McBride, Ada, Parliamentarian. Mrs. McBride, as the out-going President, presided at the business meeting of the woman's group.

McBRIDE REPRESENTS AMERICAN ORTHOPEDISTS IN LONDON

Earl D. McBride, M.D., of the McBride Bone and Joint Clinic, Oklahoma City, returned June 3 from a roundtrip flight by plane to London from Oklahoma City. As Chairman of the Editorial Committee of the American Academy of Orthopedic Surgeons, Dr. McBride was present at a policy-making meeting of the Editor and Advisory Editors of the Journal of Bone and Joint Surgery, meeting together with American orthopedists and the British Orthopedic Association.

Object of the meeting was to discuss whether mutual publication of the Journal of Bone and Joint Surgery by the British and American organizations would be continued. The British had planned to withdraw from association with the American orthopedists to publish an independent British journal, but after deliberating with the combined group of orthopedists representing both countries, it was decided that the relationship between the two groups would be continued. What may come to be known as the London Charter was drawn up, whereby the British henceforth will publish their own issues of the Journal, separate from the American issues, but the title of the publication will remain unchanged and headquarters will be maintained at 8 Fenway Street, Boston, U. S. A. Dr. William A. Rogers is to continue as the Editor in Chief.

OB & GYN CONGRESS PLANS VALUABLE PROGRAM

Complete information has been received concerning the program to be presented during the Third American Congress on Obstetrics and Gynecology, which will be held at the St. Louis Municipal Auditorium September 8 through 12, 1947. Paralleling the successful arrangement of the two preceding meetings, the morning sessions will be joint gatherings of everyone at the Congress, while the afternoons will consist of separate group meetings, joint meetings of two, three, or four groups, and of round table discussions. Daily at nine, one, and five o'clock, six simultaneous forceps or breech demonstrations will be held in the Scientific and Educational Exhibit. The forceps and breech demonstrations are part of the medical program stated in the Scientific section of the main floor.

The general morning session on Tuesday, September 9, will be devoted to the consideration of Anesthesia and Analgesia. Dr. Nicholson Eastman of Baltimore will act as Chairman and Dr. J. P. Greenhill of Chicago, Dr. John Adriani of New Orleans, Dr. Stuart Cullen of Iowa City, and Dr. Arthur Baptisti of Hagerstown will appear on the program.

The general morning session on Wednesday, September 10, will be devoted to the subject of Cancer. Dr. Robert A. Kimbrough will act as Chairman and Dr. John Randall of Iowa City, Dr. Charles L. Martin of Dallas, Dr. Joseph V. Meigs of Boston, and Dr. Herbert Schmitz of Chicago will appear on the program.

The general morning session on Thursday, September 11, will be devoted to the study of Caesarean Section. Dr. Edward A. Schumann of Philadelphia will act as Chairman and Dr. Edward G. Waters of Jersey City, Dr. M. Edward Davis of Chicago, Dr. E. D. Plass of Iowa City, and Dr. William Benbow Thompson of Los Angeles will appear on the program.

The afternoon meeting of the medical subsection on Tuesday, Wednesday, and Thursday will consider the Emotional Problems of Pregnancy; Pregnancy Complicating Cardiac Disease, Diabetes, and Tuberculosis; and Recent Advances in Endocrinology. Medical Round Tables will be held daily from four to five o'clock and will discuss Etiology of Abortion, Asphyxia, Fibroids, Prolonged Labor, Infertility, Early Ambulation, Adolescence, Treatment of Abortion, Genital Relaxation, Ovulation, Menopause, Cystic Ovary, Uterine Bleeding, Nutrition in Pregnancy, Geriatric Gynecology, Endometriosis, and Erythroblastosis.

The details of the programs in the afternoons for the nurses, hospital administrators, medical educators, and public health section are not yet fully complete and will be announced later.

The Third American Congress is designed to be of value not only to the specialist but to those who come into contact with the greatest possible number of maternity cases, the general practitioners. The program is planned to analyze, correlate and broaden the working contact of the doctor, the obstetric nurse, and the public health worker.

Application for Membership

Application for membership in the Congress should be made to: The American Congress on Obstetrics and Gynecology, 24 West Ohio Street, Chicago 10, Illinois, accompanied by membership fee of $5.00. The membership fee includes membership in the Congress, registration at the Congress; membership in the American Committee on Maternal Welfare, Inc.; and one year's subscription to *The Mother*, quarterly bulletin of the American Committee.

CAN YOU TOP THIS ONE?

Dick Graham
210 Plaza Court
Oklahoma City, Oklahoma

Dear Dick:

Just got back from the convention this morning. Funny thing happened to me on the way back, and I was just wondering if any of the other boys had had a similar experience. Thought you would probably be the proper officer to check up and see.

I was riding along about twenty-five miles out of Tulsa when I struck the rain. Well, I kept driving as fast as I could until I ran down into a little hollow and then the car wouldn't answer the steering wheel; tried to speed up a little and it didn't answer the gas peddle any better. That puzzled me, so I just let it run down, opened the door, and reached my hand down below the runningboard to see if I could feel the road. Believe me or not, there wasn't any road there. That scared me a little, but there wasn't anything to do but investigate, so I pulled off my clothes and got on top of the car and dove off to see if I could find any bottom, and did find it — about ten feet under the car. Couldn't begin to guess what was making it float, but climbed back in the car and maneuvered it as the boys did the "ducks" in the Navy, got to dry land, and drove on. Phoned back to the filling station across the street from the Mayo where I had my car serviced when I left Tulsa, and this is the story the proprietor gave me:

He said business had been kind of short and expense high, and he thought he might as well make a little profit on the convention, so with the connivance of the management of the Mayo he had piped the convention hall, so as to collect the hot air. Said the pressure didn't get really excessive till the last hour, but evidently mounted rapidly then. The inertia of the tire tester was such that when he thought he was putting 32 lbs. of air in my tires, he instead put in 500 lbs. Well, that made 3,000 lbs. of air in the six tires, so I guess it isn't any wonder that it floated.

If you hear any similar stories please let me know. Could be, of course, that Tulsa being so close to Arkansas might have something to do with it. When I was stationed at Little Rock in the last unpleasantness that Arkansas wildcat was plenty potent.

(Signed) O. C. Standifer, M.D.
Elk City, Oklahoma

INTERNATIONAL COLLEGE OF SURGEONS TO MEET

The United States Chapter of the International College of Surgeons will hold its Twelfth Annual Assembly at the Palmer House, Chicago, Illinois, from September 28 to October 4, 1947. Herbert Acuff, M.D., F.A.C.S., F.I.C.S., President of the Chapter, has announced a combined operative and clinical program which will give the profession a review of the latest concepts in surgery, as demonstrated by world renowned teachers. A large class of surgeons will be received into the College on the



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There is usually a "plus" in the treatment of the menopause when "Premarin" is employed. The "plus" is the gratifying "sense of well-being" so many women experience following orally active "Premarin" therapy. It is the intangible factor which, added to relief of distressing symptoms, enables the middle-aged woman to resume her normal routine of useful and enjoyable occupations.

To permit flexibility of dosage and enable the physician to adapt oral estrogenic therapy to the particular needs of the patient, "Premarin" is supplied in three potencies:

Tablets of 2.5 mg. bottles of 20 and 100.
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Liquid, containing 0.625 mg. in each 4 cc. (1 teaspoonful)—bottles of 120 cc.

While sodium estrone sulfate is the principal estrogen in "Premarin," other equine estrogens . . . estradiol, equilin, equilenin, hippulin . . . are also present as water soluble sulfates. The water solubility of conjugated estrogens (equine) permits rapid absorption from the gastrointestinal tract.

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night of the Convocation. Many distinguished speakers from abroad will be present, and it is announced that the new Home recently purchased by the Chapter will be dedicated.

For information pertaining to the qualifications for fellowship, associate fellowship, affiliate, or matriculate in the organization, write Louis J. Gariepy, M.D., F.I.C.S., Sec'y, 16401 Grand River Avenue, Detroit 27, Mich. Those desiring hotel accommodations should write Dr. Francis D. Wolfe, Chairman Housing Committee, c/o Chicago Convention Bureau, 33 N. LaSalle Street, Chicago 2, Ill.

COLORADO RHEUMATIC FEVER LIBRARY ESTABLISHED

The Colorado Rheumatic Fever Library has recently been established at the University of Colorado School of Medicine with the aim of assembling in one place all that has been written on the subject of rheumatic fever. It is desired that this Library contain reprints or copies of every article that has been written on rheumatic fever. The collection of works on rheumatic fever, designed to cover foreign countries as well as the United States, will be cross-indexed and bound in volumes and will ultimately be made available to all workers in the field of rheumatic fever. Persons and organizations willing to assist by contributing publications or reprints on the subject may send their material to the Colorado Rheumatic Fever Library, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver 7, Colo.

ATTENTION PHYSICIANS HOLDING INDIANA LICENSES

Any Oklahoma residents who hold Indiana licenses to practice medicine are advised that the state of Indiana has recently passed a law requiring annual registration of physicians, which will become effective July 1. Registration fee for physicians residing in the state of Indiana is $5.00; for nonresident physicians, the fee is $10.00. Application for annual registration, accompanied by the proper fee, should be made to the Indiana Board of Medical Registration and Examination, 416 K. of P. Bldg., Indianapolis 4, Indiana. Deadline for 1947 registration is August 31. Following that date, Indiana certificates for licenses may be canceled if annual registration has not been made. Failure to comply with the provisions of the new law will operate automatically to cancel the holder's certificate for a license to practice the Healing Art.

NEW GOVERNMENT BOND PLAN OFFERED TO PHYSICIANS

Because of widespread demand from professional persons for a method of investment in Government Savings Bonds which approaches the simplicity of the Payroll Savings Plan for salaried people, a new plan has been offered by the U. S. Department of the Treasury. The State Office of the Savings Bond Division reports that numerous Oklahoma doctors have inquired as to how this new method might work for them, and the following explanation is released for their information.

Doctors are already convinced of the wisdom of investing income in Government bonds. When it comes to trading in securities, they haven't the time to investigate. They're scientists, analysts of human ailments, workers, and thinkers. But not financiers. The doctor needs a "bullet-proof" investment, and the United States has provided it in Savings Bonds. But most doctors need something more. In business matters they need a string tied around a finger. The Government is offering this to them in the new Bond-a-Month Plan. Their bank ties the string, gives it a yank every month. And all the doctor has to do is leave it there.

Study of Doctors' Incomes Reveals Need for Future Planning

Before discussing what the Bond-a-Month can do for the nonsalaried doctor, it is well to look at some of the facts in the case of the average practitioner. The U. S. Department of Commerce has made studies of doctors' incomes, based on reports of a sample of the 129,000 men and women in private practice in 1940. The studies show that the income rises slowly to a maximum in the early 50's and then starts dropping. From 35 to 54 is the real money-making period. After that, the peak has been passed and income gradually drops.

Bond-a-Month is the answer to the doctor's problem of saving for future security. It opens systematic saving through Government bonds to anyone with income and a checking account in a bank. Until now this was available only through Payroll Savings. It operates in this way:

The depositor who wishes to buy a bond each month signs a card authorizing the bank to deduct the purchase price from his checking account. The bank issues the bonds and delivers them to the customer monthly. The periodic bank statement shows payment for the bonds. And from the first and the only time the doctor signs his authorization card, he has nothing else to do except open the envelopes the bank sends him with the bonds inside.

What does the doctor need?

1. He needs some sort of arrangement for his financial future because, according to studies of his profession, incomes of physicians are much more responsive to change in the national income than are the incomes in other professions. If the national income drops and patients no longer can afford to call on the doctor so often or pay him as quickly, a doctor's bankbook will feel the change.

2. In most instances, the doctor has no social security or pension to fall back on. Thus, he needs something to serve as an old age reserve.

3. He needs an arrangement which does not call for continual checking, manipulating, buying and selling.

4. He needs safety. He cannot afford to take the risks which must be protected by constant market vigilance, by buying and selling strategically.

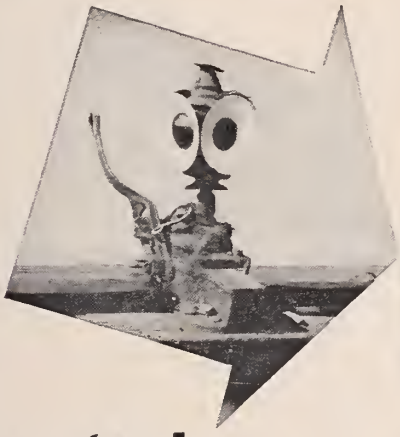
A savings bond plan should be the foundation upon which the doctor builds his security. There is no safer investment in the world than Savings Bonds. There is no riskless investment which pays such a guaranteed return.

Consider:

If you invest monthly under the Bond-a-Month plan	*In five years you will have*	*In ten years you will have*
$ 37.50	$ 2,319.00	$ 4,998.00
75.00	4,638.00	9,996.00
150.00	9,276.00	19,992.00
300.00	18,552.00	39,984.00

Here, for the doctor himself, are vitamins E, F, and G, thoroughly tested and always compounded with interest. These "vitamins" ease common symptoms of post-middle age such as chronic worry and doubt. They are available at a bank near you. And with millions of current users, there is this unusual guarantee: one and a third times your money back if you *are* satisfied.







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A SWITCH to 'Wellcome' Globin Insulin with Zinc can often save the annoyance of a second or third daily insulin injection—for in many cases the patient's needs can be supplied with *only one injection a day* of this unique intermediate-acting insulin. Three distinct steps provide the welcomed change-over:

1. THE INITIAL CHANGE-OVER DOSAGE: The first day, 30 minutes or more before breakfast, give a single dose of Globin Insulin, equal to ½ the total previous daily dose of protamine zinc insulin or of protamine zinc insulin combined with regular insulin. The next day, dose may be increased to ⅔ former total.

2. ADJUSTMENT TO 24-HOUR CONTROL: Gradually adjust the Globin Insulin dosage to provide 24-hour control as evidenced by a fasting blood sugar level of less than 150 mgm. or sugar-free urine in the fasting sample.

3. ADJUSTMENT OF DIET: Simultaneously adjust carbohydrate distribution of diet to balance insulin activity; initially 2/10, 4/10 and 4/10. Any midafternoon hypoglycemia may usually be offset by 10 to 20 grams carbohydrate at 3 to 4 p.m. Base final carbohydrate adjustment on fractional urinalyses.

Most mild and many moderately severe cases may be controlled by *one daily injection of 'Wellcome' Globin Insulin with Zinc.* Vials of 10 cc.; 40 and 80 units per cc. Developed in The Wellcome Research Laboratories, Tuckahoe, New York. U.S. Pat. 2,161,198. Literature on request.

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Have You Heard?

Paul Gallaher, M.D., Shawnee, was made a member of the American Psychiatric Association at its 103rd Annual Meeting held in May in New York City. He had formerly been an associate member of the group.

The *Okmulgee County Medical Society* was erroneously mentioned in this column in the May issue as celebrating its thirty-fourth anniversary in April of this year. The Society, which was organized in April, 1904, in reality was forty-three years old. Charter members of the organization were Drs. W. M. Cott, W. C. Mitcheuer, J. T. Hensley, Linn Alexander, W. S. Bell, P. D. Morton, J. B. Jackson, and S. B. Leslie. Four of the above charter members, *Drs. Mitchener, Hensley, Alexander*, and *Leslie*, are still living. Officers of the society elected when it was organized in 1904 were Dr. W. M. Cott, President, and Dr. Joe Milroy, Secretary-Treasurer.

W. K. Haynie, M.D., of Durant was recently notified of his election to membership in the International College of Surgeons, and will receive the degree of fellowship during the annual convocation of the organization in Chicago, September 28-October 3. He is the second Durant surgeon to receive this honor in the last six months, Dr. W. A. Hyde having been elected last November.

Charles W. Letcher, M.D., of Miami, was recently awarded his second Silver Star Medal for service with the U. S. Naval Reserve Medical Corps during the recent war with the rank of Commander. The accompanying citation states the award is made "for conspicuous gallantry and intrepidity under fire as senior medical officer on board the *U. S. S. Manila Bay* during action against the enemy Japanese forces in Linguayen Gulf, Philippine Islands, on January 5, 1945. Although painfully wounded when the sick bay was hit by an enemy bomb, Commander Letcher supervised the evacuation of the wounded from the area and directed the process of caring for the saving of many lives. His courage and devotion to duty reflects highest credit upon Commander Letcher and the United States Naval Service." Dr. Letcher also holds the Philippine Medal and a Letter of Commendation from Vice-Admiral Daniel Barbey.

J. E. Hollis, M.D., was elected president of the Bristow Lions Club at a recent meeting.

John H. Lamb, M.D., Oklahoma City, was recently elected Vice-President of the Society of Investigative Dermatology for the coming year at the meeting of that organization held in Atlantic City June 10.

James S. Petty, M.D., Guthrie, has been named to the nine-year term on the new Board of Regents of Oklahoma Colleges by Gov. Roy J. Turner. The regents will take over supervision of the following colleges: Northeastern State at Tahlequah; Southeastern State at Durant; East Central State at Ada; Central State at Edmond; Northwestern State at Alva; and Southwestern Tech at Weatherford.

The following physicians are newly located in the State and are welcomed to the ranks of Oklahoma medicine: *Sidney Kaplan, M.D.*, and *M. Henson Kaplan, M.D.*, (husband and wife), graduates of the O. U. Medical School in 1944, who have located in Enid, Oklahoma.

Carl Bowie, M.D., a graduate of the O. U. Medical School of 1946, who has joined the staff of the Moorland Hospital. He interned in Wesley Hospital, Oklahoma City, in 1946 and 1947.

Vernon Marafield, M.D., a graduate of the O. U. Medical School of the class of 1945, who recently completed his surgical residence at St. Anthony Hospital, Oklahoma City, and has established a practice in the Royalty Building, Ponca City.

Robert Harp, M.D., who has opened offices in the Mitchell Building, Pryor. Dr. Harp, a graduate of the University of Texas School of Medicine, formerly served on the staff of the Marlin Clinic Hospital as diagnostician.

George M. Winkelman, M.D., a graduate of the O. U. Medical School in 1940, who is now on the staff of the Central State Hospital at Norman, where he will specialize in internal medicine. He returns to the State from California, where he served as resident physician at the Alameda County Hospital.

Department of Health announcements: *L. H. McConnell, M.D.*, of Altus, has been appointed county superintendent of health for Jackson County, and *Kenneth Roberts, M.D.*, of Stigler, county superintendent for Haskell County. *Dr. H. R. Anderson* has been appointed part-time director of the Blaine County Health Department.

CLINICAL PATHOLOGIC CONFERENCE

(Continued from Page 292)

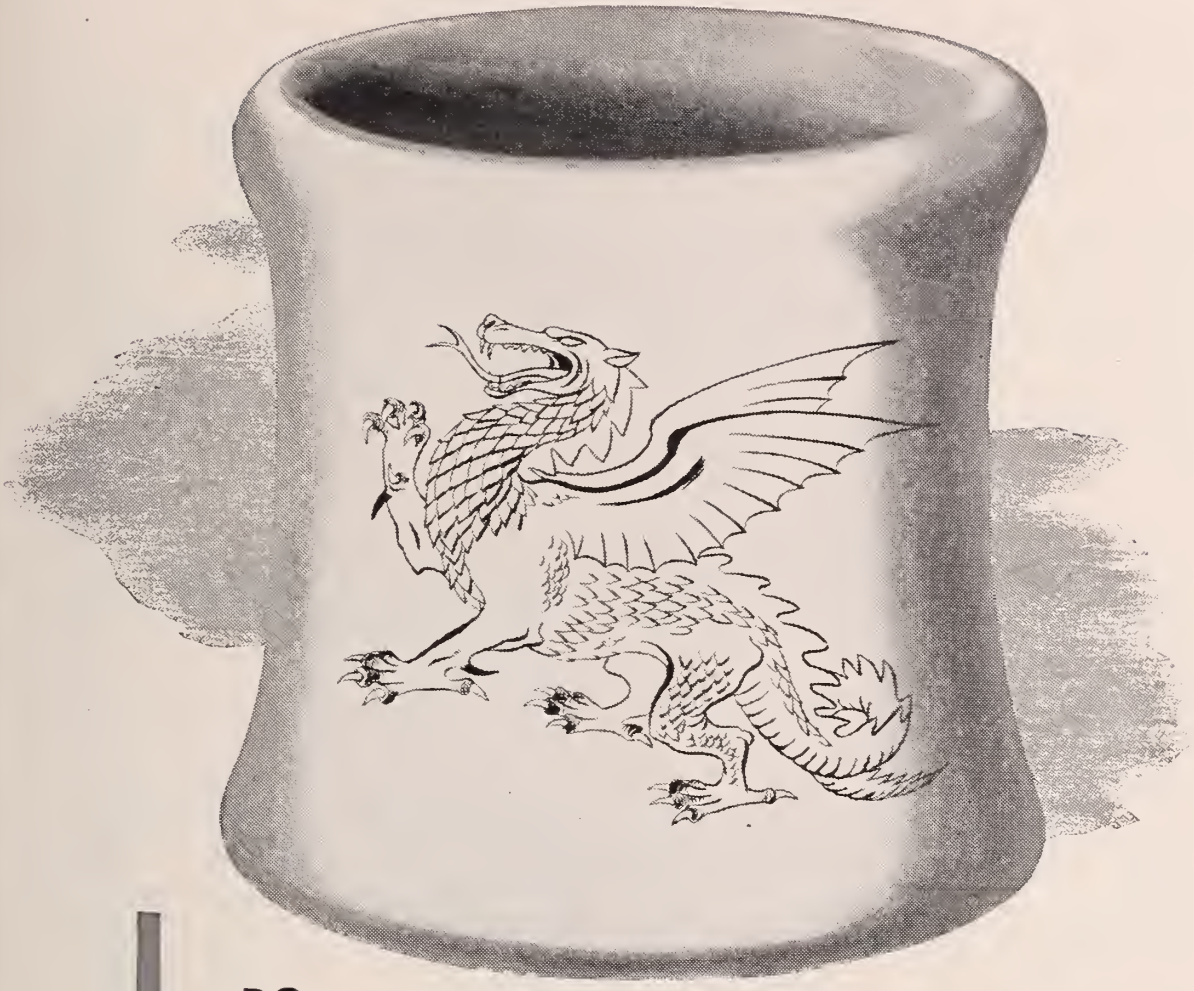
nourished as evidenced by weight loss, hypoproteinemia, etc. This was probably an important factor in his inability to localize the infection in his urinary tract.

DR. HALPERT: Was there any involvement of the intestine?

DR. HOPPS: No.

DR. HAYES: Does metastasis from the prostate invade the bone marrow?

DR. HOPPS: Yes. The bulk of this tumor was actually in the marrow space. This involvement may never be extensive enough to depress the general function of the bone marrow however. This is because the metastatic process usually involves but a small portion of the skeletal system, being limited as a rule to the pelvis, the lumbar, and sacral vertebrae.



DO YOU KNOW WHAT THESE SYMBOLS STAND FOR?

In medieval times, the dragon was the symbol of the chemist and apothecary. Ancient alchemists were said to use dragon's blood in their potions, and the dragon came to mean certain chemical actions. An apothecary advertised his wares to the world by painting a dragon on a drug pot, and hanging it over his door.

Today it is the familiar Rexall sign which assures you of superior and dependable pharmacal service. Displayed over more than 10,000 independent drug stores throughout the country, the Rexall symbol on drugs means pure, potent and uniform drugs, laboratory tested under the rigid Rexall system of controls. It means unexcelled pharmacal skill in compounding them.

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OBITUARIES

Albert Andrew Weber, M.D.
1875-1947

Albert Andrew Weber, M.D., of Bessie, was found dead at his home May 21, 1947. Death was attributed to natural causes. After receiving his medical education in Illinois, where he graduated in 1903, he was licensed to practice medicine in the state of Oklahoma in 1909. From 1907 to 1908 Dr. Weber carried on a practice in Perry, Oklahoma, later moving to Bessie. Survivors include two daughters, Mrs. Patsy Whistler of California and Mrs. Charlotte Tramel, Oklahoma; three grandchildren; and other relatives in Michigan, where he made his home before moving to Oklahoma.

Alfred Webb Herron, M.D.
1871-1947

Alfred Webb Herron, M.D., of Vinita died suddenly May 16, 1947, at his home on the Eastern Oklahoma Hospital grounds, death being attributed to a heart ailment. A graduate of the University of Arkansas Medical School in 1891, Dr. Herron received his Oklahoma license to practice medicine in 1911. He engaged in the private practice of medicine at Vinita until 1924 when he joined the star of the Eastern Oklahoma Hospital, and served there until his death. Survivors include his wife, Mrs. Lula Herron; two daughters, Mrs. J. J. Gable, Vista, Calif., and Mrs. S. M. Salyer, oNrman, Okla.; two sons, J. Webb Herron, Chickasha, and Capt. Edwin W. Herron, U. S. N., San Francisco, Calif.; and three brothers. The following physicians served as pallbearers at the funeral: P. L. Hays, F. M. Adams, P. W. Witcher, C. P. Chumley, J. M. McMillan, and F. M. Adams, Jr.

Claude Giboney Spears, M.D.
1874-1947

Claude Giboney Spears, M.D., of Altus, died suddenly at his home May 21, 1947. A native of Mississippi, he received his medical education in Texas, graduating in 1902. In 1908 he received his Oklahoma license to practice medicine, and for 45 years served Altus and the surrounding area as physician and civic leader. At the time of his death Dr. Spears was serving as Johnston County Health Officer. He was a former of the Altus City Council and was active in the Rotary Club and other organizations. Survivors include his wife, Mrs. Manda Shaw Spears; two daughters, Mrs. Jane Bowman of California and Mrs. Alice McKittrick of North Carolina; two sisters; and eight grandchildren.

Paul Griffith Sanger, M.D.
1902-1947

Paul Griffith Sanger, M.D., formerly of Vinita, died May 24, 947, in Tucumcari, New Mexico, of pneumonia. Born in Yukon, Oklahoma, he graduated from the University of Oklahoma Medical School in 1931 and for several years was resident physician at the State Hospital at Vinita. Dr. Sanger served as a captain in the Army during the recent war stationed at Fort Sill, and upon release from the services entered the private practice of medicine in Mangum, Oklahoma. He was stricken soon after he had gone to Tucumcari to establish a practice in that city.

Survivors include the following members of his family, all Oklahoma physicians: two brothers, Welborn W. Sanger, M.D., Oklahoma City and Walter B. Sanger, M.D., Miami; a cousin, Fenton A. Sanger, M.D., Oklahoma City; an uncle, F. M. Sanger, M.D., Oklahoma City; and an aunt, Winnie M. Sanger, M.D., Oklahoma City.

The immediate family surviving are his wife, Mrs. Ruth Donelly Sanger; son, Paul G., Jr.; and daughter, Sonja Sue, all of Mangum; and his mother, Mrs. S. S. Sanger, of Yukon.

THE MEDICAL SCHOOL

CALENDAR — JULY, 1947

SURGICAL PATHOLOGIC CONFERENCES — Each Tuesday 12:00 Noon to 1:00 P.M.

MEDICAL CONFERENCES — Each Wednesday, 9:00 A.M. to 10:00 A.M.

CLINICAL PATHOLOGIC CONFERENCES — Each Thursday 12:00 Noon to 1:00 P.M.

TUMOR CLINICS — First and Third Tuesdays (July 1 and 15) 8:00 A.M. to 9:00 A.M.

UROLOGIC-PATHOLOGIC CONFERENCE — Second Tuesday (July 8) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING — Second Friday (July 11) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE — Fourth Monday July 28) 6:45 P.M. to 7:30 P.M.

The annual meeting of the American Association of Anatomists held at McGill University, Montreal, April 3, 4, and 5, was attended by Dr. K. M. Richter and Dr. J. W. Barnard of this school. Subsequent to this meeting, Dr. Richter spent a week at the Marine Biological Laboratory and New York University studying micro-manipulation and tissue culture methods.

Mark Johnson (Med '46) has completed his internship at Wisconsin General Hospital, Madison, Wisconsin, and is serving as Cleveland County Health Officer while awaiting call to military service.

Captain William T. Snoddy (Med '44) was a recent visitor here. His last assignment was with the 11th General Dispensary at Kobe, Japan. He returned to Seattle, Washington, May 7, 1947, and was discharged May 17, 1947. He plans to take a residency in Pathology.

Millington O. Young (Med '44), who is serving his residency in Pathology with the University Hospitals, has been given an appointment to continue graduate training in Surgery with the Department of Surgery at Yale University School of Medicine, New Haven, Connecticut, beginning July 1, 1947.



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Clinical Entity	Patients	Satisfactory	Questionable	No Benefit	% Showing Improvement
URTICARIA	766	692	16	58	90.3
VASOMOTOR RHINITIS	349	268	2	79	76.7
ECZEMA	128	79	7	42	61.7
HAY FEVER	425	350	36	39	82.4
ASTHMA	435	275	7	153	63.2
MIGRAINE	73	48	1	24	65.7
ANGIONEUROTIC EDEMA	54	46	1	7	85.2
ATOPIC DERMATITIS	66	42	1	23	63.6
PRURITUS	24	18		6	75.0
ERYTHEMA MULTIFORME	28	22		6	78.6
DERMOGRAPHIA	20	15		5	75.0
FOOD ALLERGY	37	32		5	86.5
CONTACT DERMATITIS	63	49		14	77.7
PHYSICAL ALLERGY	11	7		4	63.6
REACTIONS—ANTIBIOTIC	84	81	1	2	96.4
REACTIONS—DRUGS	46	42		4	91.3
REACTIONS—BIOLOGICS	12	12			100.0
DYSMENORRHEA*	44	38		6	86.3
TOTALS	2665	2116	72	478	79.39

*those cases due to histamine-induced spasm of smooth muscle.

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BOOK REVIEWS

AN INTEGRATED PRACTICE OF MEDICINE: A COMPLETE GENERAL PRACTICE OF MEDICINE FROM DIFFERENTIAL DIAGNOSIS BY PRESENTING SYMPTOMS TO SPECIFIC MANAGEMENT OF THE PATIENT. Harold Thomas Hyman, M.D. Volumes I, II, III, and IV, and Index. 1184 illustrations, 305 in color. 319 Differential Diagnostic Tables. Price: $50.00 per set. Philadelphia and London: W. B. Saunders Company, 1947.

An Integrated Practice of Medicine by Harold Thomas Hyman represents a monumental effort to present medicine in concise, comprehensive, comprehendible form. It attempts to meet a crying need by covering the broad field of general practice in such a way that scientific facts, symptoms, and signs can be readily identified and brought into proper relationship to disease. The author stresses the importance of the *biologic unity* of the body. Modern medical progress has placed such a load on the general practitioner that often he has neglected the art of medicine. Not practicing the art, he has to some extent lost sight of its value, yet there has never been a time in the history of man when he was so definitely in need of the psychological lift which only his physician can supply. This work in four great volumes covering 4131 pages with an extra volume devoted to a very workable index should help to restore the dignity of general practice and keep a few young men out of the marathon toward specialty boards until they are taught and seasoned by experience and thus better prepared for the race.

Perhaps Hyman's integrated medicine will help the members of the medical profession to realize there must be an awakening. Only about 15 per cent of the people who seek medical care are in need of a specialist and already one-third to one-half the physicians are working in special fields where the art of medicine often is sorely neglected.

It is the reviewer's opinion that this five-volume work on general practice is timely and that it may help turn the tide toward the proper patient-doctor relationship with emphasis upon the personality as well as the disease entity. For the specialist this work has certain limitations but for the general practitioner it should not only help him diagnose and treat his patients intelligently but it should help him to discover the fact that only a small number of his patients are in need of highly specialized care. The well-informed, alert general practitioner fully occupying his domain in the art and science of medicine should materially lighten the specialist's load by a wise appraisal and sifting of his cases.

An Integrated Practice of Medicine, with its readily assembled diagnostic and therapeutic data, should be in the hands of every student of medicine and every general practitioner.—Lewis J. Moorman, M.D.

PRINCIPLES AND PRACTICE OF OBSTETRICS. Ninth Edition. Joseph B. DeLee, M.D., and J. P. Greenhill, M.D. 1011 pages; 1108 illustrations on 860 figures, 211 in color. Price, $10. Philadelphia and London: W. B. Saunders Company, 1947.

The ninth edition adds another great milestone in the series of obstetrical textbooks by Drs. DeLee and Greenhill. In this edition many chapters have been added which are extremely helpful and practicable. These chapters are: "Minor Disturbances in Pregnancy," "Premature Labor, Prolonged Pregnancy or Post Maturity or Missed Labor," "Fetal Erythroblastosis," "Care of Premature Babies," and "Circumcisions." Most of the other chapters have practically been rewritten with the latest techniques and dosages included. Numerous illustrations have been added, especially on instructive dissections of the pelvis.

One very important improvement is a bibliography at the end of each chapter giving the original reference of the material with source, date of publication, and full title of the article.

This book is almost a must for medical students, hospital house staffs, and physicians doing obstetrics.—Thomas C. Points, M.D.

REHABILITATION THROUGH BETTER NUTRITION: University of Cincinnati Studies in Nutrition at the Hillman Hospital, Birmingham, Alabama. Tom D. Spies, M.D., from the Department of Internal Medicine, University of Cincinnati College of Medicine. 94 pp. with 50 figures. Price, $4. Philadelphia and London: W. B. Saunders Company, 1947.

This monograph of 83 pages in book form is based on the investigative work in nutrition studies done at the Hillman Hospital, Birmingham, Alabama. It is a complete resume of the author's method of selection of cases for study based on the type of history and physical examination used. These are given in detail. Certain types of anemia which are associated with nutritional deficiency are included: namely, Addisonian pernicious anemia, nutritional macrocytic, nontropical sprue, and iron deficiency anemia. There is also a short discussion of the role of protein where associated. Much of the book is devoted to actual findings in patients with nutritive failure.

Although the author takes up in detail the vitamins separately, with the exception of vitamins D and K, for purpose of discussion of symptoms, diagnosis, and treatment, emphasis is placed on the concept of nutritive failure, the mixed deficiency diseases, the exactness in the diagnosis, and the complete therapy for full rehabilitation.

Dr. Spies, in the selection of the cases for his study, has concerned himself mainly with primary malnutrition which he classifies as that type of nutritional failure which occurs due to inadequate diet in essential nutrients.

Mention is made of the study in nutrition of 278 cases in 1930 at Cincinnati. These included well-defined ones of pellagra, scurvy, and beri-beri. His studies there led to the Birmingham study. Ten thousand, eight hundred and fifty-one patients were selected. It was kept in mind that nutritional disease occurred often in the indigent, in those with a history of erroneous dietary habits or food idiosyncrasies, in persons with organic disease or infections which might interfere with ingestion or utilization of food, in pregnant or lactating women or persons whose physical exercise had been increased greatly, and in persons addicted to alcohol. Nine hundred and fourteen patients of this group were selected for attempted rehabilitation on the following basis: First, one or more definitely defined deficiency diseases and nutritional failure severe enough to prevent working had to be present; second, the patient had no means of changing his dietary habits; third, he must be between



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[1]Human Fertility 10: 25 (Mar.) 1945.

[2]Warner, M. P.: J.A.M.A. 115: 279 (July 27) 1940.

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ages of 16 and 35; fourth, he must have no serious organic disease; and fifth, he must not be an alcoholic.

The symptoms, findings, and treatment of deficiencies of vitamin A, niacin, thiamin, riboflavin, C, anemias associated, and protein are individually discussed. In each case therapy was directed toward getting the patient well as quickly as possible. The diets used are given in detail, as are the methods of vitamin and mineral supplement. Such problems as the difficulty in eating due to soreness of the mouth or the absence of teeth and the methods of making foods and medication more palatable are discussed. Eight hundred ninety-three of this group returned to work in good health.

Dr. Spies feels that nutritive failure is a variable picture without a specific connotation, and it does not indicate why, but that it has, failed. To prevent this failure the patient must have access to the nutritive foods, properly prepared, in sufficient amounts, ingested and absorbed. The importance of diet in the treatment of disease was known by the Greek and Roman physicians, but only recently has it been shown that certain foods in deficiency diseases restore the patient to health. Scientists in the past have placed too little significance in the role of nutrients in physiologic process.

The monograph is very interesting both from a statistical point of view and also because of its specific and definite methods of treatment. There are many case reports and photographs, some colored, which illustrate the subject matter.—Elmer R. Musick, M.D.

MEDICAL ABSTRACTS

CORROSIVE INJURIES OF THE ESOPHAGUS: WITH PARTICULAR REFERENCE TO THE TREATMENT OF ACUTE CORROSIVE ESOPHAGITIS. Truls Leegaard, M.D. The Journal of Laryngology and Otology. Volume 60, pp. 389-414. October, 1945.

Reports of corrosive esophagitis are usually very pathetic. The author describes his experiences in the Otorhinolaryngological Department of the Rikshospital in Oslo.

Corrosive injuries of the esophagus may be seen in patients of all ages, in children as well as in adults. The injuries may arise from swallowing acids and alkalis, but in the majority of cases the careless use of chemical laundry materials, solutions of lye or washing powders, are responsible for the injuries.

The symptoms depend on the concentration of the corrosive substance and on the amount swallowed. A single gulp can produce very severe injuries. The patient feels burning pain in the mouth and throat; edema and injection of the mucosa appears, with white corrosion marks on the visible parts of lips, tongue, palate and throat. Edema of the laryngeal aperture may cause respiratory obstruction. Difficulty in swallowing appears with marked salivation and vomiting, which may be bloodstained.

Later there are pains in the chest, radiating to the back, and indicating a rather deep lesion of the esophageal wall. Fever may be present, with other toxic symptoms and a severe exhaustion which may lead to death in a few days. In a deep corrosion of the esophageal wall there will be periesophageal changes, perforation of the wall, purulent esophagitis and mediastinitis, with possible perforation into the neighboring structures (pleural cavity, heart sac, trachea, bronchi).

The diagnosis is usually easy, though it may be difficult to determine the localization of the corrosion and its depth. The usual belief is that the most injured parts of the esophagus are at the so-called physiological strictures of the tube. The author's experience shows that, though strictures may arise at the mouth of the esophagus, the site of greatest injury is usually in the lower third of esophagus. He even made experiments with methylene blue to determine the site of election in esophageal corrosions. these experiments also showed that the physiological narrow point of the esophagus have no special susceptibility for corrosive fluids.

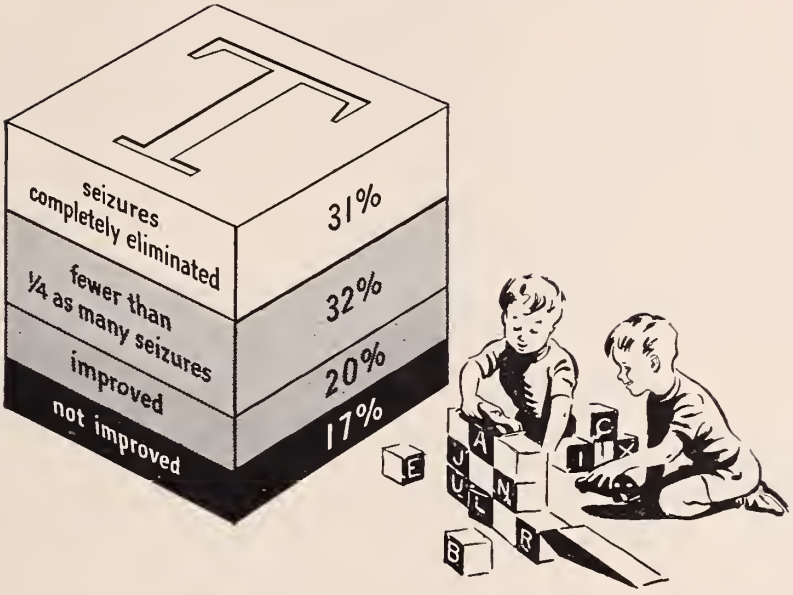
The pathological and reparative changes appearing after corrosion have been chiefly described by Belinov. From his investigations it is known that fibroblast appear in the esophageal wall 24 hours after the injury, and collagen fibrils develop in the course of the second week. Firm scar tissue may be found after three weeks.

According to the degree of action of the corrosive substances on the wall of the esophagus, acute corrosive esophagitis appears in three forms: 1) the very slight, and slight forms, 2) the moderately severe cases, and 3) the severe cases. The first group is characterized by necrosis of the most superficial epithelial layer, moderate demarcating inflammation, occasionally with superficial scars which may be linear, semilunar or annular. In the more serious cases, which form about 60 per cent of the injuries, the necrosis goes down to the submucosa as far as the tunica muscularis; the entire musculature is infiltrated by thick scar masses, and the scars embrace the whole circumference, being annular or tubular. In the severe cases, ca. 30 per cent of all injuries, the necrosis comprises the tunica muscularis, and may even extend beyond the esophageal wall. The dead areas are cast off, swallowed or vomited up; separation usually occurs between the fifth and seventh days, or later. The reparative phase, i.e., the scar formation, may take several months. Above the stricture a dilatation of the esophagus may arise, occasionally of huge dimensions.

The prognosis is doubtful. Mortality rates vary according to countries, from 20 per cent to 50 per cent. Even if there is no immediate death in the acute stage, the stricture formation may endanger the patient's life by poor nutrition, possible perforation on passage of a bougie, impaction of food bolus, etc. The functional prognosis depends on the type of treatment.

The essential treatment is dilatation, which should begin before the scar tissue is formed. The risk of early treatment is, however, great. The problem is when the early treatment should begin and how is should be carried out. There is Salzer who starts dilatation treatment on the second day, and there is Fraenkel who delays it until the end of the second week. Belinov recommends the treatment with bougies ought to begin after seven to ten days, as a rule in the beginning of the second week when the collagen fibers first appear. Scar formation cannot be hindered but it can be controlled.

Daily instrumentation is, however, dangerous and liable to cause perforation. The daily passage of sounds acts as a trauma upon the corroded wall of esophagus, and may stimulate further scar formation. The author himself recommends that for adults and older children the daily passage of soft bougies after Salzer's method should be used in the injuries of lesser degree. In severe cases external esophagotomy, with introduction of a retained tube is performed. A retailed catheter introduced



83% of petit mal cases improve with Tridione

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Here's new evidence of the effectiveness of Tridione in the treatment of petit mal. In a recent study, Tridione was given to 166 patients suffering from petit mal (pyknoepilepsy), myoclonic jerks or akinetic seizures.[13] This group as a whole had received but mediocre benefits from other medicaments. With Tridione, 31% of the 166 became free of seizures; 32% had fewer than one-fourth of the previous number of seizures; 20% improved to a lesser extent; 13% remained unchanged, and only 4% became worse. *Thus 83% showed improvement.* In some cases the seizures *did not return* after Tridione was discontinued, the longest seizure-free period thus far being 18 months. Studies also have shown that Tridione is of benefit to certain psychomotor patients when given in conjunction with other antiepileptic drugs.[12] Tridione is available through your pharmacy in 0.3-Gm. capsules and in pleasant-tasting aqueous solution containing 0.15 Gm. per fluidrachm. Capsules in bottles of 100 and 1000; solution in 1-pint and 1-gallon bottles. If you wish to know more about Tridione, just write to ABBOTT LABORATORIES, North Chicago, Illinois.

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through the nose is used for small children in the first year of life for the milder cases, and in more severe cases external esophacotomy is recommended with the retained tube.

Subsequently the treatment, when strictures are already established, consists in dilatation by diathermy of circumscribed cicatrization. The commonest method is to dilate with bougies which are introduced through the mouth, either blindly or by means of the esophagoscope. The increase in the calibre of the bougies should progress very slowly, otherwise a reaction on the part of the mucous membrane is obtained in the form of edema, and possibly increase the formation of connective tissue.

Before beginning treatment with bougies, the nature of the stricture should be ascertained by means of x-ray investigation and esophagoscopy. The results of treatment are of course less favorable when patients come under treatment weeks after the injury. But treatment carried through patiently and energetically can achieve much, though it may take several years.—M.D.H.

SURGICAL SUBSTITUTIONS FOR LOSSES OF THE EXTERNAL EAR. James Barrett Brown, Bradford Cannon, Carl Lischer, W. B. Davis, and Andrew Moore. Surgery, Gynecology, and Obstetrics. Vol. 84, No. 2, pp. 192-197.

"Losses of the external ear are numerous and often complicate other serious defects so that plans for rapid and simple restoration are important, without the use of massive distant flaps or great number of operations. The losses result mostly from burns, gunshot wounds, traffic accidents, and freezing."

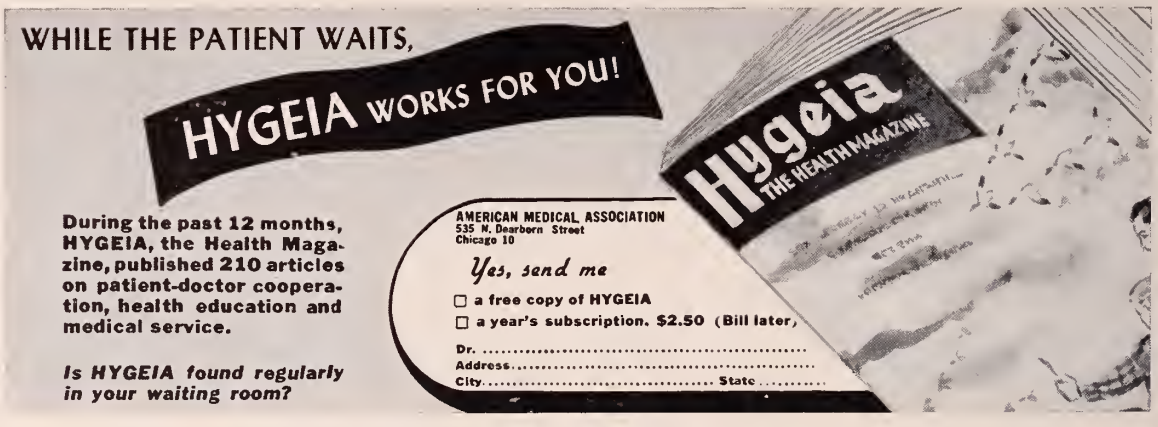
The authors report a method that they have thoroughly tried out in the Army Medieal Corps. This method has certain limitations but for a great many cases it is applicable and is certain to be weleomed by men doing this type of work since heretofore any ear reconstruction of any size has required several operations and required considerable tissue for replaeement.—J.F.B.

KEY TO ABSTRACTORS

M.D.H. Marvin D. Henley, M.D.
J.F.B. John F. Burton, M.D.

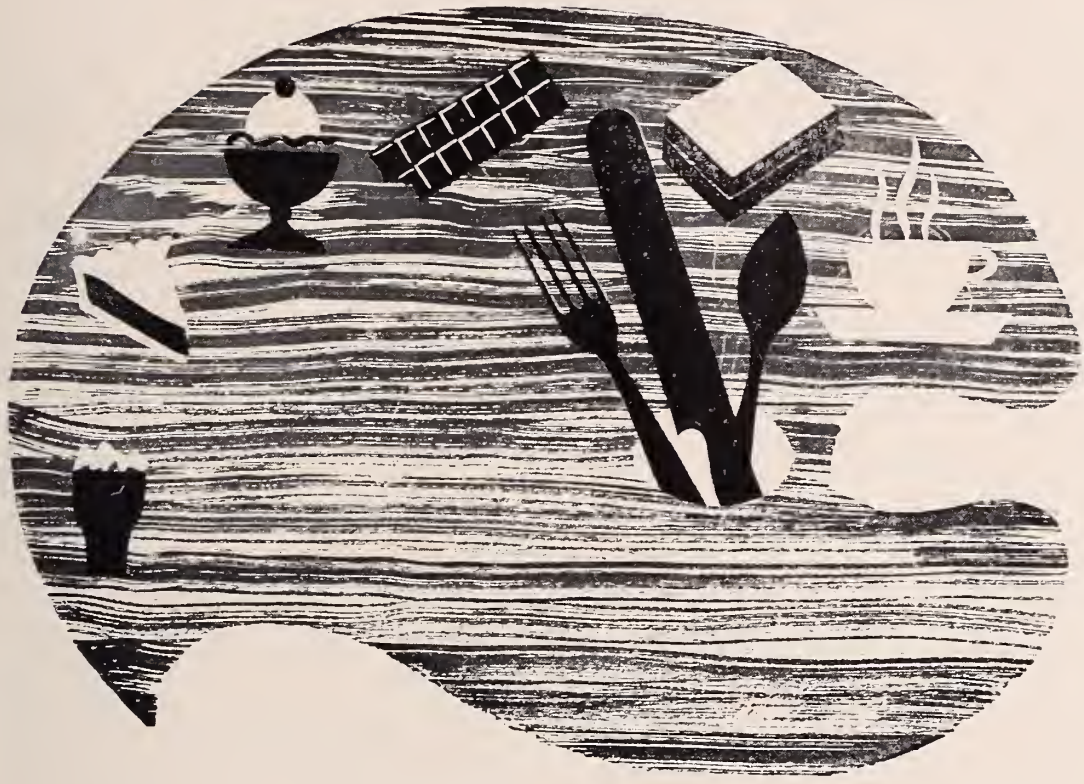
MEASLES COMBAT KIDNEY DISEASE IN CHILDRÈN

Measles may prove to be effective in combating nephrosis, a kidney disease sometimes found in children, according to Drs. Richard W. Blumberg and Harold A. Cassady of Cincinnati, writing in the *American Journal of Diseases of Children*, published by the American Medical Association. Of five patients with kidney disease who became infected with measles, they state, the symptoms subsided in two while the other three experieneed temporary improvement of their nephrosis. The physicians, who are from the Children's Hospital Research Foundation and the Department of Pediatrics, University of Cincinnati College of Medicine, point out that infection with measles was more effective in causing abatement of the kidney disease than any other curative agents they used.









the art of eating

Too many people "seem to feel that the art of eating consists of filling the stomach to capacity three times a day."[1] They ignore the fact that "calories alone do not make a balanced diet."[1] They need, therefore, and will continue to need, support of vitamin supplements. To better reconcile the science of nutrition with the "art of eating," Upjohn provides a full range of potent, balanced vitamin preparations. In a variety of dosage forms, Upjohn vitamins help paint a better nutritional picture for all age groups by obviating deficiencies or providing for their treatment in the practice of medicine and surgery.

1. J. South Carolina M. Assn. 52:186 (July) 1946.

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Alfalfa	L. R. Kirby, Cherokee	L. T. Lancaster, Cherokee	Last Tues. each Second Month
Atoka-Bryan-Coal-Johnston	J. S. Fulton, Atoka	A. T. Baker, Durant	
Beckham	O. C. Standifer, Elk City	J. E. Levick, Elk City	Second Tuesday
Blaine	Fred Perry, Okeene	Virginia Curtin, Watonga	Third Thursday
Caddo	George W. Conover, Jr., Anadarko	Edward T. Cook, Jr., Anadarko	Third Thursday
Canadian	G. L. Goodman, Yukon	Jack W. Myers, El Reno	Subject to Call
Carter	J. M. Gordon, Ardmore	C. D. Cunningham, Ardmore	Second Tuesday
Cherokee	P. H. Medearis, Tahlequah	R. K. McIntosh, Jr., Tahlequah	First Tuesday
Choctaw-McCurtain-Pushmataha	Reed Wolfe, Hugo	Fred D. Switzer, Hugo	
Cleveland	Orville Woodson, Norman	T. A. Ragan, Norman	Thursday nights
Comanche	Leslie T. Hamm, Lawton	Byron W. Aycock, Lawton	Third Tuesday
Cotton	G. W. Baker, Walters	Mollie Seism, Walters	Third Friday
Craig	P. L. Hayes, Vinita	J. M. McMillan, Vinita	
Creek	O. H. Cowart, Bristow	F. H. Sisler, Jr., Bristow	Second Tuesday
Custer	Willard H. Smith, Clinton	D. W. McCauley, Clinton	Third Thursday
Garfield	Francis M. Duffy, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	Thomas F. Gross, Lindsay	John R. Callaway, Pauls Valley	Wed. before 3rd Thur.
Grady	R. R. Coates, Chickasha	Wesley W. Davis, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	F. P. Robinson, Pond Creek	
Greer	Dwight D. Pierson, Mangum	J. B. Hollis, Mangum	
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis	First Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams, McCurtain	
Hughes	Clyde Kernek, Holdenville	H. V. Schaff, Holdenville	First Friday
Jackson	E. W. Mabry, Altus	J. P. Irby, Altus	Last Monday
Jefferson	J. A. Dillard, Waurika	O. J. Hagg, Waurika	Second Monday
Kay-Noble	E. C. Mohler, Ponca City	Edwin Yeary, Ponca City	Second Thursday
Kingfisher	John R. Taylor, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	J. Wm. Finch, Hobart	R. F. Shriner, Jr., Hobart	
LeFlore	John H. Harvey, Heavener	Rush L. Wright, Poteau	
Lincoln	J. S. Rollins, Prague	Ned Burleson, Prague	First Wednesday
Logan	James Petty, Guthrie	J. E. Souter, Guthrie	Last Tuesday
Mayes	E. H. Werling, Pryor	Paul B. Cameron, Pryor	
McClain	I. N. Kolb, Blanchard	W. C. McCurdy, Jr., Purcell	
McIntosh	F. R. First, Sr., Checotah	W. A. Tolleson, Eufaula	Third Thursday
Muskogee-Sequoyah-Wagoner	W. P. Fite, Muskogee	William N. Weaver, Muskogee	First Tuesday
Northwestern	Myron England, Woodward	C. W. Tedrowe, Woodward	2nd Thurs. Even Mo.
Okfuskee	L. J. Spickard, Okemah	M. L. Whitney, Okemah	
Oklahoma	F. Redding Hood, Oklahoma City	George E. Kimball, Oklahoma City	Fourth Tuesday
Okmulgee	John Cotteral, Henryetta	C. E. Smith, Henryetta	Fourth Tuesday
Osage	R. O. Smith, Hominy	Gayfree Ellison, Pawhuska	Second Monday
Ottawa	B. Wright Shelton, Miami	W. Jackson Sayles, Miami	Third Monday
Payne-Pawnee	C. H. Haddox, Pawnee	C. W. Moore, Stillwater	Second Thursday
Pittsburg	Homer C. Wheeler, McAlester	Edward D. Greenberger, McAlester	Third Friday
Pontotoc-Murray	E. D. Padberg, Ada	Ollie McBride, Ada	First Wednesday
Pottawatomie	Charles F. Paramore, Shawnee	Clinton Gallaher, Shawnee	1st and 3rd Saturday
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	
Seminole	Claude B. Knight, Wewoka	Mack I. Shanholtz, Wewoka	
Stephens	E. H. Lindley, Duncan	E. C. Lindley, Duncan	Third Wednesday
Texas	Daniel S. Lee, Guymon	E. L. Buford, Guymon	Third Wednesday
Tillman	G. A. Tallant, Frederick	O. G. Bacon, Frederick	
Tulsa	E. O. Johnson, Tulsa	John E. McDonald, Tulsa	Second and Fourth Monday
Washington Nowata	Thomas Wells, Bartlesville	L. B. Word, Bartlesville	
Washita	A. H. Bungardt, Cordell	Aubrey E. Stowers, Sentinel	Second Wednesday
Woods	C. A. Traverse, Alva	O. E. Templin, Alva	Last Tuesday Odd Months

COUNCILORS AND VICE-COUNCILORS

(Figure indicate year terms expire.)

District No. 1: Alfalfa, Beaver, Cimarron, Dewey, Ellis, Harper, Texas, Woods, Woodward—O. E. Templin, M.D., Alva (C) 1950; O. C. Newman, M.D., Shattuck (V-C) 1950.

District No. 2: Beckham, Custer, Greer, Harmon, Jackson, Kiowa, Roger Mills, Tillman, Washita—L. G. Livingston, M.D., Cordell (C) 1948; O. C. Standifer, M.D., Elk City (V-C) 1950.

District No. 3: Garfield, Grant, Kay Noble, Pawnee, Payne—Bruce Hinson, M.D., Enid (C) 1950; R. W. Choice, M.D., Wakita (V-C) 1950.

District No. 4: Blaine, Canadian, Cleveland, Kingfisher, Logan, Oklahoma—Carroll Pounders, M.D., Oklahoma City (C) 1950; Joe Phelps, M.D., El Reno (V-C) 1950.

District No. 5: Cadda, Carter, Comanche, Cotton, Grady, Jefferson, Love, Stephens—J. L. Patterson, M.D., Duncan (C) 1948; J. Hobson Veazey, M.D., Ardmore (V-C) 1950.

District No. 6: Creek, Nowata, Osage, Rogers, Tulsa, Washington—Ralph McGill, M.D., Tulsa (C) 1949; Ralph Rucker, M.D., Bartlesville (V-C) 1950.

District No. 7: Garvin, Hughes, Lincoln, McClain, Murray, Okfuskee, Pontotoc, Pottawatomie, Seminole—Clinton Gallaher, M.D., Shawnee (C) 1950; Ned Burleson, M.D., Prague (V-C) 1950.

District No. 8: Adair, Cherokee, Craig, Deleware, Mayes, Muskogee, Okmulgee, Ottawa, Sequoyah, Wagoner—J. G. Edwards, M.D., Okmulgee (C) 1948; W. J. Sayles, M.D., (V-C) 1950.

District No. 9: Haskell, Latimer, LeFlore, McIntosh, Pittsburg—Earl Woodson, M.D., Poteau (C) 1948; E. H. Shuller, M.D., McAlester (V-C) 1950.

District No. 10: Atoka, Bryan, Choctaw, Coal, Johnston, Marshall, McCurtain, Pushmataha—W. K. Haynie, M.D., Durant (C) 1950; W. W. Cotton, M.D., Atoka (V-C) 1950.

THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

ABIDING SATISFACTIONS IN THE PRESENT PATIENT-PHYSICIAN RELATIONSHIP

The medical students and the young doctors should realize that the decision to study medicine implies sustained intellectual progress and opens a fertile field for creative endeavor. The physician who fails to cultivate this field cannot hope to reap a full harvest. He should let the roots of scientific, cultural, and ethical principles sink far beneath the surface and find anchorage in the rockbound subsoil. If he does this, the winds of ignorance, fallacy, and quackery can do no harm. Necessarily the successful physician is catholic in his contacts and accordingly he should develop understanding, tolerance, and hope as valuable adjuncts to his scientific attainments. This is particularly true if he adopts the ancient Greek's understanding of the soul, encompassing the inner man through intellect, willpower, imagination, and emotion. If he fully qualifies in this respect, the average patient will discover something luminous in his personality. This should shine as a candle lit with understanding, tolerance, and mercy.

In addition to the patient's physical needs, there may be a spiritual hunger which must be satisfied through the art of medicine. In this connection the physician should remember that hope is the spiritual bread of life. He must carry this "staff of life" and share it. The body dominated by a famishing soul cannot amply respond to therapy and rise above disease. Skill in the discovery of physical pathology may be lost without the power to discern the patient's psychological reaction to the existing pathology and its effects.

The physician who has grown old in the practice of the above principles may sit in the twilight of his medical career with the satisfaction and resignation of Socrates, who taught the world the art of reason and the exercise of consummate courage in behalf of mankind.

TOLERANCE PLEASE

Those who read the Journal critically should remember that the Editorial Board and the Journal staff find it difficult to decide what should go in the Journal and what should be left out.

After the scientific material is carefully sifted and edited, there is a great load of nondescript material including news, advertising, and notices often with urgent appeals for publicity. Of modern interest is the fact that in June, 1666, the London Gazette reluctantly announced an advertising supplement with this appealing explanatory note, "being daily prest to the publication of books, medicines, and other things not properly the business of a Paper of Intelligence." This was long before the fast-going days of modern communication, rapacious competition, fancy pharmaceuticals, vitamin fantasies, and the fallacious possibilities of "honest" advertising. What would the poor London Gazette do now?

A HEAVY LOAD OF MEDICAL LORE

A few weeks ago Fishbein's *History of the American Medical Association* came from the W. B. Saunders Press. This is a book every doctor and many laymen should read. Particularly should young doctors who have not grown up with the A. M. A. read this thrilling story.

More than three hundred pages of this comprehensive work are devoted to biographies of the presidents. This section was contributed by Walter L. Bierring and deserves a careful reading. Thomas Carlyle said, "The history of the world is the biography of great men." The 100 presidents have come

from 25 states and the District of Columbia. Since the average age of the presidents was 60 years, the young physician who reads may take hope. Of great interest is the section dealing with the recipients of the Distinguished Service Medal which has been awarded annually since 1938. The 1947 recipient, not included in the book, is Henry A. Christian of Boston.

Aside from the inspirational phases of this great work, the histories of the publications, councils, bureaus, and other official bodies should be carefully read by every member of the Association.

It is said that when asked if he had read *Gone With the Wind*, Eddie Cantor said, "Hell, no, I can't lift it." He should try this volume of 1226 pages.

OLIN WEST, ASSOCIATE MEMBER

Early in April, the Board of Trustees of the American Medical Association announced the resignation of Dr. West as President-Elect of the A. M. A. It was unfortunate that Dr. West found it necessary to resign because of ill health. The greater part of his professional life has been spent in behalf of organized medicine and the advancement of public health.

In the letter tendering his resignation, there is this note of sadness: "It now seems probable that I shall not be able to attend the Centennial Session to be held in Atlantic City, in which case I hope you, as Chairman of the Board of Trustees, will present my apologies for my failure in office. I hope that the House of Delegates will believe that 'the spirt was willing but the flesh was weak.'

"I have an abiding faith in the A. M. A. and in the sincerity, integrity, and soundness of judgment of those who have served and now are serving as members of its official bodies. May the richest of blessings come to all of them."

It was only fitting that the Oklahoma State Medical Association's House of Delegates, in recognition of long and valued service, elected him to Associate Membership in the Oklahoma State Medical Association.

In its gracious attempt to honor a great exponent of organized medicine, the House of Delegates brought greater honor to the State Medical Association. See Dr. West's letter of acceptance on page 348.

THE STAMP OF APPROVAL

When the Post Office Department of the United States announced that a three-cent stamp had been issued to commemorate the birth of the American Medical Association and the services of the medical profession during the past century, the President of the United States was advocating before Congress a nation-wide compulsory sickness insurance program. This paradoxical coincidence was supplemented by the immediate introduction of the ubiquitous Wagner-Murray-Dingell bill. Many may wonder if the latter is mere coincidence or premeditated conniving with political expediency in mind. It seems strange that the United States could memorialize medicine because of its beneficent services while, in high places, important government officials are advocating policies which, if approved, would mean its destruction as a free enterprise.

In this connection, neither the *Journal of the American Medical Association*[1] nor *Time*[2], in discussing this stamp which reproduces the famous Sir Luke Fildes' *The Doctor*, refer to an important episode in the life of Sir James Clark, physician to the royal family in Great Britain, whose benignant face adorns the Luke Fildes painting. Long before he was Sir James, attending royalty, and long before he was portrayed as the kindly family doctor attending a sick child in a poverty stricken rural home instead of the queen in her palace, he discovered the neglected English poet, John Keats, dying of tuberculosis in Rome. Though it was impossible to save Keats' life, Dr. Clark visited his bedside frequently and lingered to give him comfort and care. This was long before Great Britain's physicians were disturbed by regimentation. With this change in the character of medical care, it is no wonder that people have ceased to shed tears as they pause to contemplate the famous painting of *The Doctor* which hangs in London's well known Tate Gallery — the people and the doctors are hardened by government handling.

1. *The Journal of the American Medical Association*, Editorial, June 7, 1947.
2. *Time*, p. 44, June 23, 1947.

OUR COVER

The Journal gratefully acknowledges permission of Dr. Donald Guthrie, of the Guthrie Clinic, Sayre, Pennsylvania, to reproduce on our cover the original artist's study of Fildes' *The Doctor*. The painting was presented to the Clinic by Allan P. Kirby, and was exhibited in the Auditorium at the recent A. M. A. Centennial Celebration. It was from this original study that the large painting hanging in London's Tate Gallery was made.

SCIENTIFIC ARTICLES

ACNE VULGARIS IN ADOLESCENCE*

ONIS G. HAZEL, M.D.
OKLAHOMA CITY, OKLAHOMA

Acne vulgaris is a chronic inflammatory disease of the pilosebaceous follicles characterized by comedones, papules, pustules, cysts, and nodules.[1] It is one of the most common skin diseases of adolescence and is one of the chief causes of an inferiority complex in nonaggresive youngsters. The psychic trauma may last into adulthood, and when the scarring is severe, may last for life. It may vary widely in severity from mere oily skin with comedones, to deep, destructive pustules or cysts with permanent scarring. This fact has led many writers to classify acne into many clinical types, such as the comedone or blackhead type, the papular, pustular, indurated, cystic, and keloid types. The author feels that they are all merely a difference in the degree of the individual's reaction to the etiological factors.

LOCATION

The most common sites of predilection are the cheeks although in addition the chin, the forehead, the neck, the chest, the shoulders, the back, and the buttocks may be involved.

ETIOLOGY

There is no common skin disease in which there is such a widespread difference in opinion as to the etiology. The following are the factors most commonly listed by dermatologists.

1. Heredity certainly may offer an etiological background.[2] In a high percentage of cases one or both of the parents have had a certain degree of acne in adolescence. It seems reasonable that a child could inherit a greasy, coarse skin the same way that patients with ichthyosis, or fish-skin disease, invariably give a history of dry skin in one parent.

2. Puberty[3] usually ushers in the case of acne and is offered as a cause.

3. Endocrine disturbances of the glands, thyroid, and pituitary.[4]

4. Infection due to the acne bacillus has had great vogue in the past. This organism along with many other bacteria can be found in and on the skin of patients who do not have any clinical evidence of acne vulgaris.

5. Digestive disturbances.[5]

6. Disturbances in water balance.[6]

7. Hyperactivity parasympathetic nervous system.[7]

8. The psychoneurogenous component.[8]

9. Excessive intake of fat.[9] Richard L. Sutton, Jr., is definitely committed to this etiological explanation and he has many supporters. He feels that an increased fat intake produces a pustular lipoidosis of the skin and that a low fat diet and thyroid extract constitute the bulwark of successful acne treatment. I subscribe in part to this theory but have seen soldiers with severe acne and gastric ulcer improve on frequent feedings of cream and milk.

10. Carbohydrates. Crawford and Swartz[10] hospitalized a group of severe acne cases and gave them diets excessive in carbohydrates and in addition gave them glucose intravenously and noted a 50 per cent improvement in the cases, and not one was made worse. I place no limitation on carbohydrate intake.

PATHOLOGY

This condition is characterized by a perifollicular inflammation, by comedones, and in the pustular lesions by local necrosis, surrounded by a dense zone of polymorphonuclear leukocytes. The more indolent and indurated lesions show a foreign body type of reaction with fibroblasts, plasma cells, and giant cells.

TREATMENT

The treatment of acne vulgaris is as varied as the theories of the etiology. The following

*Presented before the Section on Medicine of the Oklahoma State Medical Association at the Annual Meeting, May 14, 1947.

therapeutic approach is offered for your consideration.

1. *Diet.* The author insists that the patient avoid chocolate, nuts, cheese, greasy foods, gravies, and rich pastries. The average patient will not lose weight on such a diet. He is encouraged to eat freely of fruit, vegetables, chicken, fish, broiled meats, and foods rich in carbohydrates.

2. *Care of the scalp.* Most cases of acne have an associated seborrhea of the scalp with excessive exfoliation and pruritis. A shampoo once a week with Ivory soap, castile soap, or Packer's tar soap, followed with a vinegar rinse, may be sufficient. If seborrhea is at all prominent, a tar-sulphur-salicylic acid, in a water soluble base, is prescribed, with directions to massage it into the scalp with the finger tips the night before shampoo.

3. *Care of the skin of the face.* Oily skin characterizes acne and this excessive oil appears to irritate the skin and should be removed several times a day. A detergent oil or a detergent cake preparation which is a sulphonated oil and does not contain any alkali is recommended. Such detergents are available under trade names of "Allercreme Detergent Oil," "Acidulate," "Physoderm," "Dermolate," "Louila," and many others. The patient is instructed to wash the face with warm water for two or three minutes and then to pour a half teaspoonful (estimated) of the detergent oil in one palm, rub the palms together, and then rub the face well for one minute; then rinse first with warm water and then with cold water. This cleansing is done morning and night.

4. *Surgical treatment.* The careful removal of comedones with a "Schamberg" comedone extractor is accomplished in the office. The pustules are incised with a sharp, sterile cataract knife, or a number 11 Bard-Parker blade and the contents evacuated with gentle pressure and the bleeding controlled by hot compresses or towels. This procedure is also done in the office and at first the interval is one week, later two weeks, later once a month, until the patient is well. This type of surgical drainage hastens the resolution of the pustules, reduces scarring, and does not result in the spreading of bacterial infection. The removal of the comedones reduces the inflammation of the follicle and may prevent a subsequent pustule by promoting drainage of the oil from the oil gland. Resistant cysts are incised and curetted with an eye curette and swabbed with a small applicator wet with liquid phenol and followed with an applicator wet with alcohol. This may appear a severe procedure but is well accepted by a patient who has lived with his acne for years.

5. *Local applications.* In the mild or comedone type the previously described cleansing of the face may be all that is necessary to reduce the oiliness of the skin. In the more severe papular and pustular type it is advisable to use a drying-exfoliating lotion such as Sulphur-Resorcin lotion at bedtime after cleansing the face. An occasional patient will be sensitive to Resorcin and if so it can be discontinued with the first evidence of dermatitis. In teen-age girls with oily skin and considerable erythema and selfconsciousness, a drying foundation lotion is prescribed for day use. One such preparation that is easily available is Almay's foundation lotion. This acts as a drying agent as well as a cover-up powder which helps the patient's morale until marked improvement is obtained.

6. *Preparations by mouth. Vitamin A.* Straumfjord[11] and others have written on the effects of vitamin A on acne. There is no particular evidence of vitamin A deficiency in patients with acne but its use, in 100,000 unit doses at bedtime, has been so helpful in managing acne in adolescence that the author prescribes it routinely. It brings about a certain normal dryness of the skin and the pustules and comedones that do develop are fewer in number and less severe. This form of therapy should be maintained for at least a year after all evidence of acne has disappeared.

7. *Adequate rest and sleep.* Eight hours of sleep daily is an important part of the therapy for adolescent acne.

8. *X-ray therapy.* It is acknowledged that there are severe cases of acne which will not satisfactorily respond to the above-mentioned procedure and in spite of the treatment develop deep pustules, abscesses, or cysts. It is in these cases that x-ray seems indicated. There is a mistaken idea among the parents of acne patients that x-ray scars the skin, but this has been disproved by treating a series of cases on one side of the face and then observing the patient for six months. Many such studies have proved that it is the destruction of tissue by the pustules and subsequent abscess formation that lead to the pitted scars and not the x-ray. The best accepted dosage is 75 r units[12] to each

side of the face at weekly intervals for a total of eight to 12 treatments. The eyes, the hair margins, and the lips are protected with lead. The consensus of opinion is that such conservative doses will not result in atrophy or wrinkling of the skin years later. The author feels that x-ray should not be given to any patient under 16 years of age since the incidence of recurrence is higher in this young age group.

This type of therapy does not atrophy the oil glands but does destroy the radio-sensitive lymphocyte which makes up a large part of the cellular infiltrate in the papule, pustule, or cyst. There should be no overlap of the treated areas. The voltage used should be between 60 KV and 80 KV, and the milliamperage between 3 and 5 M.A. The average distance between the target and the skin should be approximately eight to 11 inches. The roentgen unit output should be calibrated at regular intervals with an "r" meter such as the Victoreen "r" meter. The use of x-ray therapy implies the same degree of responsibility and skill as that in surgery or any specialized branch of medicine.

SUMMARY

1. Acne vulgaris is a common skin disease of adolescence and is thought to have many etiological factors.

2. The use of local and general measures is suggested as a therapeutic approach.

3. There is yet much to be desired in a satisfactory explanation as to the cause and treatment of acne vulgaris.

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MEET OUR CONTRIBUTORS

Onis G. Hazel, M.D., Oklahoma City, is the author of "Acne Vulgaris in Adolescence" appearing in this issue. He is a graduate of the University of Oklahoma School of Medicine ('31) and limits his practice to dermatology. Dr. Hazel is a member of the American Academy of Dermatology and Syphilology and a diplomate of the American Board of Dermatology and Syphilology. He is a member of the Board of Directors of the Oklahoma County Medical society and a delegate to the State Medical Association from his county society. He received his master of science degree from Johns Hopkins University in 1930 and his doctor of science in medicine degree from Columbia University in 1937. Dr. Hazel served with the Army Medical Corps during the recent war with the rank of lieutenant colonel.

Walter F. Sethney, M.D., of Tulsa, who is the author of "The Electrolytes in Treatment," is a graduate of Columbia University College of Physicians and Surgeons, class of '38. He is a diplomate of the American Board of Pediatrics. Dr. Sethney previously was located in Menominee, Michigan, with the U. S. Army. He limits his practice to pediatrics.

Charles H. Haralson, M.D., of Tulsa, is the author of "Cataracts." He received his medical education in Georgia, graduating in 1914, and limits his practice to ophthalmology.

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T. R. Turner, M.D., A.B., M.S. in Neurology and Psychiatry, of Tulsa, is the author of "The Use of Curare in Electric Shock Therapy." He is a graduate of Baylor University College of Medicine class of '41 and completed a three-year fellowship in Neurology and Psychiatry at the Mayo Clinic, Rochester, Minn. He has practiced in Tulsa during the past two years, and limits his practice to neurology and psychiatry.

Floyd Moorman, M.D., F.A.C.P., and *Bela Halpert, M.D.*, Oklahoma City, presented the Clinical Pathologic Conference which is reported in this issue. Dr. Moorman received his medical degree from the University of Louisville in 1925, and limits his practice to diseases of the chest. He belongs to the American College of Chest Physicians, the American College of Physicians, and the American Trudeau Society, and is Chairman of the Oklahoma State Medical Association's Committee for the Study and Control of Tuberculosis. Dr. Halpert is Director of Laboratories at the Oklahoma University School of Medicine and a graduate of the Medical School of Prague, Czechoslovakia. He has previously been mentioned in this column in connection with presentation of the Clinical Pathologic Conferences.

THE ELECTROLYTES IN TREATMENT*

WALTER F. SETHNEY, M.D.
TULSA, OKLAHOMA

The newborn baby comes into this world physiologically equipped to carry on all functions necessary for the maintenance of life. As a newborn he is faced with many problems, a few among them being breathing, temperature regulation, swallowing, etc. For many of these problems he is totally dependent upon his mother; for others he is self-sufficient. The equilibrium of the electrolytes, and the interrelated acid-base equilibrium, constitute one of these automatic self-sufficient systems and it is our present topic of discussion.

The pH of the body is maintained between 7.35 and 7.45 by a delicate buffer system consisting of the proteins, phosphates, and carbonates. The carbonate, or more accurately the bicarbonate-carbonic acid ratio, is by far the most important. The concentration of bicarbonate in the plasma can be readily determined in the laboratory by the Van Slyke method, and, thus, we have a reliable means of seeing what is going on at any given time, as the CO_2 combining power of the plasma indicates the alkaline reserve of bicarbonate in the body fluids.

Whenever there is an increased production of acids by the body or an increased loss of alkali from the body the condition of acidosis develops. Here the buffers of the plasma come into play in order to keep the pH constant. The buffers receive help from the kidneys since they are able to secrete an acid urine and by the formation of ammonia (from urea) there is a tendency to neutralize the excess acid.

During this time the bicarbonate of the plasma decreases since there are extra acid radicals that must be neutralized and this is done at the expense of the bicarbonate. This decrease follows the mathematical formula

$$\frac{H^- \times HCO_3^-}{H_2CO_3} = K \text{ or } H^- = K \frac{H_2CO_3}{HCO_3^-}$$

Conditions causing such an acidosis may be summarized as follows: First, those in which there is an increased production of acid in the body, and second, those in which there is an excess loss of mineral base from the body.

Among the former group, those of increased production of acid we have conditions in which there is excess ingestion of acid producing salts such as ammonium chloride, boric acid, or salicylates and the type in which there is an abnormal production of acids in the body as seen in diabetes. Then, there is the group in which there is impaired excretion of acids by the kidney as seen in nephritis, starvation and dehydration with its subsequent suppression of urine and, finally, the group in which there is impaired removal of CO_2 from the lungs as seen in marked pulmonary disease.

In the latter group of causes of acidosis, those in which there is an excess loss of mineral base from the body, we find the diarrheas, dysenteries, and cases in which there is a fistula.

Clinically the most reliable sign of acidosis is a deep pauseless rapid type of breathing known as hyperpnea associated with a dry skin. The urine is acid in reaction. The diagnosis is confirmed by the laboratory finding of a low CO_2 combining power.

In treating the acidosis we must first supply fluids, usually parenteral fluids in order to correct the dehydration. But dehydration is more than a reduction of the insterstitial fluids: it is a deficiency of water and minerals usually associated with a reduction of blood plasma. If the acidosis is mild and if the kidneys are functioning properly a normal saline solution may be used, and, as the kidney is capable of selectively secreting the chloride and retaining the sodium, the acidosis will be overcome. However, in the more severe cases of acidosis Ringer's solution is preferable to normal saline because in addition to the sodium and chloride ions it supplies fixed base in the form of potassium, calcium, and magnesium and is indicated in all forms of severe dehydration particularly when large amounts of gastrointestinal secretions have been lost as in vomiting, diarrhea, diabetic acidosis, and severe infections.

*Presented before the Section on Medicine of the Oklahoma State Medical Association at the Annual Meeting, May 15, 1947.

It is necessary, also, to supply the body with extra alkali in order to correct the acidosis more rapidly. Of the types of alkali that can be given intravenously sodium bicarbonate and sodium lactate are the most convenient.

There should be no mystery about the use of sodium bicarbonate as it can safely be given intravenously without too much fear of untoward reaction. It cannot be autoclaved and sterilized as it is not stable, but if a fresh package of soda is opened and with a clean spatula some of it removed, it can be transferred to clean filter paper and weighed, if desired, then dissolved in the sterile water and given intravenously. It has been shown that one gram of soda bicarbonate per kilogram of body weight will increase the plasma CO_2 about 35 vol. per 100 cc. Thus, if a CO_2 combining power is determined it is easy to calculate the exact amount of soda bicarbonate necessary to bring the CO_2 combining power up to the normal between 45-65 vol. per 100 cc. The figures in children are slightly lower, from 40-55 to 60 being considered normal.

Sodium lactate can be given intravenously. It is given as a 1/6 Molar solution which is isotonic and which can be purchased ready prepared from the Baxter Company or can be obtained as a 1 Molar solution from Eli Lilly. This latter solution must be diluted with five volumes of sterile water in order to make it isotonic before it can be used. One cc. of a 1/6 Molar sodium lactate solution per kilogram of body weight will raise the plasma CO_2 1.8 volumes per 100 cc.

A few typical examples will be given. In the case of a baby with a severe diarrhea and in acidosis it is imperative to give fluids to combat the dehydration. In addition to the fluids it is neccesary to supply electrolytes in the form of Ringer's solution. This fluid may be given intravenously in the amount of 10 cc. per pound of body weight for any one administration and repeated as soon as four hours later. If the infusion is to be given continuously it can be given at the rate of three cc. per pound per hour. If so desired, and it is advisable to do so, this can be augmented by giving subcutaneous fluid.

The problem has not yet been completely solved, as the diarrhea continues and the baby continues to lose fixed base in the stools, and he has an accumulation of acid phosphates and sulfates in his plasma since the kidneys have shut down during the period of dehydration. Now by the addition of sodium bicarbonate or lactate to our fluid regime we can compensate for the loss of fixed base and neutralize the acid products of the plasma. Now, and only now, may other forms of therapy directed toward controlling the diarrhea be instituted, it being understood that any glucose solution given furnishes extra fuel for the body and that blood transfusions are an invaluable adjunct in therapy.

Another example is one that is encountered by most doctors regardless of their field of practice: namely, the treatment of a patient in diabetic acidosis. Here the patient is dehydrated and in addition to the dehydration the polyuria and vomiting cause the loss of fixed base by way of the kidneys. Because of the abnormal combustion of his fats there is an accumulation of ketone bodies which are acid in reaction and tend to increase the acidosis. In treating this patient fluids should be given intravenously to combat the dehydration, and soda bicarbonate or sodium lactate should be given, also, in order to compensate for the loss of fixed base and to neutralize the ketosis. The administration of alkali in this manner leads to a quicker recovery and is often life saving. The intravenous use of glucose and the administration of insulin are essential parts in the treatment of a patient with diabetic coma.

Clinically patients with acidosis greatly outnumber those with alkalosis.

Alkalosis is the result of an excess accumulation of alkali in the body or an excess loss of acid from the body. In either instance the plasma CO_2 will rise.

Summarizing the causes of alkalosis we have first those cases caused by the accumulation of alkali as seen when there is an over ingestion of alkali, usually soda bicarbonate and particularly when there is impaired renal function; second, those cases of alkalosis caused by an excess loss of acid from the body as seen in patients with vomiting, particularly the vomiting of pyloric stenosis or pertussis; and third, the cases seen where there is an overventilation by the lungs with an increased loss of CO_2 as illustrated by patients with organic brain disease.

Alkalosis gives no constant clinical signs but respirations are usually slow with periods of apnea and may go on to the production of tetany.

An increase in the plasma CO_2 will make the diagnosis.

Treatment depends upon the selective power of secretion of the kidneys in getting rid of the excess base, and theoretically at least upon the administration of acid radi-

cals. The inhalation of CO_2 is also useful.

To those of us in pediatrics who are dealing with infants whose physiology is not as stable as that of the adult these changes are of great importance and are more readily noticed owing to great lability of the baby. However, it is my belief that many adults exhibit similar changes true enough to a lesser but none the less definite degree. You have all seen them in the diabetic and you have all seen patients with profound vomiting or dysentery with renal disease, pulmonary disease, or organic brain disease. It is only natural to stress the pathology and direct all treatment toward the correction of this condition. In many cases, I feel sure, the fact that the patient may be in acidosis is overlooked, when by the simple procedure of determining a plasma CO_2 it would be possible to treat the patient a bit more expertly, to get him well a bit faster, to more clearly understand his clinical signs and symptoms, if you would heed a pediatrician's plea and give some consideration to the electrolytes in treatment.

CATARACTS*

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Cataracts may be defined as any change in capsule or cortex which alters the refractive index of the crystalline lens. The metabolism of the crystalline lens is directly associated with body metabolism. It therefore follows that any systemic disease may be the etiological factor in lens changes. Hence, lens opacities require a complete evaluation of that individual's past and present health.

Adult lens changes which occur before the age of 60 are usually toxic in origin, and must be diagnosed and treated; otherwise, any type of surgery is followed by complications and visual loss.

Lens changes after the age of 60 are classified as senile changes, and by many observers are considered to be inevitable. That I do not believe to be true. Careful evaluation of the patient's physical status and the correction of faulty habits seems to affect the progress of the cataracts very favorably.

The usual cataract patient consults his physician complaining of photophobia, spots before the eyes, dizziness, or headaches. These are vague and indefinite symptoms; however, their repetition should call for an inspection of the eyes.

The other cataract patient is "smart" and knows that he should see about glasses, drops into the establishment under the first sign that he or his neighbor can recall, and buys a pair of glasses. This he repeats until such a time that he can no longer be made to see. He is then told that the doctor would not fit him, thereby proving that the doctor is an honest man.

The cataract patient who by reference or contact consults an ophthalmologist has a right to expect to continue to see. This right can be protected only by methodical inspection of the eye and evaluation of the patient's physical status. Routine eye examination should include visual acuity, intraocular tension, examination of the iris, light reflexes, and structure; under cycloplegia the lens and anterior segment of the vitreous should be examined with the corneal microspoe.

Fundus examination, when possible, aids greatly in the prognosis. Dilated veins, sclerotic arteries, and liquid vitreous are warning signals, and must be taken into consideration when outlining the management of the problem. Cataracts that are too advanced to allow inspection of the vitreous or fundus may be evaluated by light projection and motility of the iris. Inspection of the other eye gives fairly reliable information about the posterior segment of the cataractus eye.

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Both eyes should be fitted in lenses, and the patient should have a complete physical inspection; all foci of infection should be evaluated, and either removed or taken into consideration in the method of handling the patient. The patient should be given definite instructions, and should be required to return for examination as often as is indicated.

The time of operation in the routine cataract is optional; the lens may be removed at any time up to maturity, at which time surgery is imperative, the hypermature cataract being a distinct hazard to a successful result.

Management of the early cataract is most important. The patient becomes eye-minded for the first time, talks eyes and seeks information from most inadequate sources, and in evaluating symptoms is often led astray, ending up with complications that are excruciatingly painful, expensive, and that result in visual loss.

Early lens changes produce a gradual loss of visual acuity, the visual loss being so gradual that the patient is not conscious of any inconvenience and thinks the glasses are dirty or ascribes the inconvenience to the way he feels. Later he finds that the vision is better without glasses and boasts of second sight. This is due to the development of a lenticular myopia, and is always evidence of lens swelling, and development of lens opacities. This often occurs without eye symptoms, until the individual's attention is, by comparison, called to the visual loss. At this time glasses are changed and a small improvement in vision is appreciated, and the patient is lulled in to a false sense of security, rightly thinking that anyone who is licensed to examine eyes would undoubtedly have found such a common thing as cataracts.

Unfortunately, the number of such eyes is entirely too large. Many eyes are seen that have been destroyed by glaucoma while waiting for the total loss of vision on the advice of reputable practitioners. This can and should be prevented by constant observation of all cataractus eyes until they are quiescent or the lens has been removed. This is not easy, but is the responsibility that the examining physician must assume if he is to fulfill his obligation to this group of patients.

Cataract extraction is one of the oldest surgical procedures. Volumes have been written on diagnosis, etiology, technique, and postoperative treatment. In spite of this, the incidence of failure is too large. Differences in technique, while important, are not the answer. The controversy between intracapsular and extracapsular extraction of the crystalline lens continues.

In the hands of an ophthalmic surgeon either intra- or extracapsular extraction gives satisfactory results. The small advantage of the extracapsular extraction in skill required for extraction of the lens is compensated for by the extra hazard of lens cortex and subsequent operative procedures required for the completion of the procedure.

Complicated cataracts have their individual problems that must be dealt with as indicated; therefore, no dogmatic statements can be made. However, it is my observation that the lens should be removed in the capsule if it is at all possible, the complications that occur during the surgical procedure being much less serious than those complications which occur following surgery in the extracapsular extractions.

Preoperative treatment is of the utmost importance in successful cataract surgery. The patient must be in the best possible physical condition; careful attention to detail is imperative if complications are to be avoided.

Preoperative ocular examination should be complete — cornea, anterior chamber, iris, and lens, with attention paid to the prominence of the globe and the size of the lid aperture.

My routine for cataract extraction: (1) Adequate sedation, (2) akinesia of lids (Van Lint), (3) thorough anesthesia, (4) retrobulbar injection, (5) canthoplasty when indicated, (6) superior rectus suture, corneoscleral section made from ten to two o'clock with a Graefe knife, (7) two corneo-scleral sutures, (8) full corneal section completed with scissors, (9) iridectomy, (10) lens removed in capsule by forceps or suction cup, (11) corneo-scleral sutures tied, (12) iris replaced, and (13) binocular dressing.

After care the patient is kept on back for four hours, after which time he may be turned on either side, the head to be kept flat for at least a week.

CONCLUSIONS

Early diagnosis of lens changes is practical and will definitely decrease visual loss.

Cataractus eyes are diseased eyes and should be under observation until arrested or operated.

Time of operation can be arranged to suit the convenience of the patient — the cataracts do not have to be mature.

The intracapsular removal of the lens gives the best chance for good visual acuity.

COMMON FUNGOUS INFECTIONS*

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Among the dermatologic diseases which the general practitioner may be called on to treat, the skin affections produced by fungi make perhaps the largest single group. This discussion will be limited to the superficial and deep types of fungous infections commonly encountered in everyday practice.

Dermatophytosis is manifested clinically in three forms as follows:

1. The interdigital variety, with scaling between the toes varying from the mild grade to the severely macerated, white, soggy epidermis, accompanied by fissuring, swelling of the toes, secondary dermatitis and pyogenic infections of the contiguous skin surfaces.

2. The acute vesicular type, which usually appears on the sole and extends along the arch on the dorsum of the foot. The vesicles rupture or become desiccated, leaving crusted and finally superficial erythematous areas surrounded by a scaly collarette.

3. The hyperkeratotic type, which favors the sole, the arch, and the region of the ankle. The lesion is usually well circumscribed, dry, scaly, and erythematous.

The interdigital type usually accompanies the other two varieties. Itching is the most important subjective symptom. Hyperhidrosis is frequently present. Secondary infection may take place, producing lymphangitis and adenitis of the inguinal glands.

Allergic id reactions may occur on distant parts, due to hematogenous transmission of fungous toxins. The most common site for dermatophytid is the hand. There the lesions occur as small vesicles on the sides of the fingers or often as small, deep, tense vesicles on the palms. Often the development of the id reaction is initiated by too zealous treatment of the original infection of the foot. Ids constitute the group of hematogenous mycoses and develop usually in the course of acute inflammatory mycotic diseases which cause a general sensitization and allergic condition of the skin.

The presence of an accompanying fungous infection of the feet does not prove that a given vesicular eruption of the hands is a phytid, since a fairly high proportion of the population may have some degree of fungous infection of the feet. The true phytid eruption occurs about the thenar and hypothenar areas and on the sides of the fingers, and in severe cases may cover a large part of the hand. The vesicles are usually pin-head sized, clear, and finally dry, forming brownish scales.

In differential diagnosis superficial fungous infections of the hands are most confusing. Contact dermatitis is usually manifest by areas of erythema, scaling, thin-walled vesicles, papules, and wheals. It is rarely symmetrical, usually involves the dorsa, starts on one area, and spreads slowly or rapidly. Bacterial infections follow previous dermatitis or trauma and are indolent, pustular, and crusted. Nummular eczema is a peculiar eruption appearing on the dorsa of the hands and anterolateral aspects of the extremities. The lesions start as a group of vesicles and rapidly become a brilliant red, elevated, circular, oozing patch which involutes by clearing in the center, spreading peripherally until healing occurs.

The clinical manifestations of many eczematous fungous affections so closely resemble other eczematous processes that an unequivocal diagnosis cannot be made, or can be made only after long and careful study and by exclusion of other possible causes, including contact dermatitis.

A thorough knowledge of the actions of a few valuable remedies and a sufficient acquaintance with their use is more important than the haphazard application of many. A common error in the management of dermatophytosis is the application of the strongest possible fungicidal agent. The acute denuded, weeping, erythematous fungous dermatitis is best treated by wet dressings such as potassium permanganate 1:10,000 dilution. For the subacute form use a lotion, i. e. five per cent liquor carbonis detergens in calamine-zinc oxide lotion or, if secondarily infected, three per cent ammoniated mercury ointment. Only the healing and scaly, thickened manifestations should be treated with strong keratolytic agents such as Whitfield's oint-

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ment, half to full strength. Most proprietary remedies fall in this last group, and applied indiscriminately, produce the many complications seen in everyday practice. While remedies such as gentian violet and other dyes are powerful fungicides, they do not find favor in the eyes of the average American who goes swimming or who exposes his feet in locker rooms and gymnasiums. X-ray in fractional doses is a valuable adjunctive measure in the subacute and chronic stages.

Two points are particularly to be stressed: quiescent foci are at best left alone — stirring them up may produce or maintain a generalized dermatophytid eruption. When a refractory id exists, treatment of the focus, reduction of the number of fungi present, and concomitant reduction of circulating allergens is indicated. Great caution must be used to prevent the use of x-ray exceeding the tolerance of the affected areas. Often the patient, and not the physician, is to blame for excessive dosage, for in order to obtain relief from a present attack, some patients will deliberately withhold information regarding previous treatment, having learned that this information will lead to a refusal to administer further x-ray.

Systemic measures of value include reduction of weight and carbohydrate intake. Treatment for hyperhidrosis and superficial fungous disease may consist in managing an underlying tuberculosis or vasomotor instability, some dyshormonal condition, some neurologic disease or even some psychoneurotic state.

Acute attacks of dermatophytosis are usually due to a flare-up of a dormant infection and are not often due to picking up fungi from bath mats, floors, bath tubs, etc. There is a close relationship between sanitary habits of the subject and presence of fungous infection of the feet. There is no significant difference in the incidence of fungous infection among those who use gymnasium dressing rooms and showers frequently and those who do not use them at all. Family contacts appear to be of no importance in causing ringworm infection. Conjugal and familial transmission of fungous diseases is either nonexistent or a great rarity. Note that Pack and Schwartz could not culture any fungi from shower room floorings which had just been used by several hundred workers. Sterilizing measures are useless.

The infection is favored by increased sweating, often induced by flat feet and the wearing of ill fitting shoes. Prevention of attacks is founded on prevention of friction, moisture, and maceration and on the acidification of intertriginous areas rather than on killing fungi.

Involvement of the nails is manifested by the characteristic dull, lusterless, opaque appearance. Infection may produce deformity of the nail plate, or separation of the nail plate by an underlying hyperkeratosis. Considerable difficulty may be met with in the diagnosis of mycotic affection of the nails which may be mistaken for eczema of the nail bed, chronic onychia, trophic disturbances, changes due to traumatism or to other diseases like psoriasis, lichen planus, or syphilis. Quiescent foci in the nails do not usually lead to mycotic skin diseases elsewhere. If the nail and periungual tissues are not themselves causing local trouble, they can generally be left alone. If badly infected mycotic nails are to be treated, avulsion followed by local treatment is the method of choice. In my opinion surgical avulsion of badly infected nails is indicated only when it is probable that the fungi in such nails are actual causes of therapy-resistant dermatitis or when the nail itself is giving trouble. In most cases, even badly infected nails give rise to little if any trouble and rarely produce mycotic infection of the skin; in such quiescent cases leave the nails strictly alone. If they are the source of skin infection scrape them down and apply x-ray or chrysarobin tincture to reduce the quantity of allergen to a satisfactory degree. The condition is usually stubborn and may resist even repeated avulsions.

Ringworm of the general surface, or tinea circinata, occurs as one, several, or more small, slightly elevated, sharply limited, somewhat scaly, hyperemic spots. Usually the patch or patches are from one-half to one inch in diameter, the innermost or central part pale red, or of apparently normal color, with or without scaliness, and the outer portion somewhat elevated, mildly inflammatory, and scaly. At times, when close together, several may merge and form a large, irregular, gyrate patch. The most frequent sites for ringworm are the face, neck, hands, and forearms, although they may be seen anywhere on the smooth surface.

Tinea circinata may be mistaken for circinate patches of seborrheic dermatitis, pityriasis rosea, psoriasis, or even for a superficial serpiginous tertiary syphilide. The lesions of seborrheic dermatitis are yellow and greasy and are generally located on the presternal and interscapular regions, sites not

commonly attacked by ringworm. In psoriasis the circinate and gyrate figures have a broader border which is bright pink in color and covered with silvery scales. The patches of pityriasis rosea are delicate, oval in shape, with a pinkish border which is not raised and which encloses a characteristic fawn-tinted center. Syphilitic lesions are differentiated by being indurated, of a deep brownish-red color, and having no scales.

The treatment of tinea circinata consists of painting the lesions with dilute tincture of iodine or the application of half-strength Whitfield's ointment.

Another form affecting the genitocrural region is known as tinea cruris. It may begin here, as the ordinary superficial ring type, usually several or more areas soon presenting, or quite frequently as an intertrigo or a superficial intertriginous eczematoid eruption. The center may be paler and less involved, or actively irritated, while the periphery still extends in one or more annular festoons down the inner side of the thigh or upward over the buttocks. Favored by heat and moisture the malady may spread rapidly, the whole of the genitocrural region may become involved, even, in extreme cases, extending some distance down the thighs, upward on the pubic region, and backward to the anus and immediate neighborhood. In women it may also extend onto the mucous membrane of the vulva. Occasionally this type is also observed in one or both avillae.

In the acute inflammatory stage treatment should consist of moist compresses of potassium permanganate 1:10,000. Most cases are encountered in the dry, scaly stage which can be cured within two to three weeks with the daily application of three per cent salicylic acid and six per cent precipitated sulphur in white vaseline.

Tinea versicolor is another common fungous infection, caused by the Microsporon furfur, which produces fawn-colored, finely desquamative, guttate, nummular or palm-sized patches. These tend to run together and usually occur on the upper part of the trunk. The individual patches are yellowish or brownish macules, which gradually increase in size and coalesce to form extensive, delicately scaling lesions.

Tinea versicolor must be differentiated from seborrheic dermatitis and syphilis. In seborrheic dermatitis the patches have an erythematous yellowish tint and the scales are soft and greasy, whereas in tinea versicolor the scales are bran like. The macular syphilide consists of faint pink lesions, less than one centimeter in diameter, which are distributed principally on the sides of the trunk and flexor aspects of the extremities.

The mycelia of the fungus have a protective action against light. After prolonged exposure to the sun the normal skin may become tanned and the areas affected by the fungus will apear white as in leucoderma. In this case treatment must be directed at the apparently depigmented patches and, after a cure is effected, the skin is exposed to the sun until an even tan is obtained.

The disease responds readily to simple treatment but this must be persistent and thorough as there is a likelihood of recurrence if a small focus of fungus remains. Ten per cent solution of sodium hyposulfite is applied morning and night for several weeks. The underwear and pajamas should be sterilized by boiling, and changed daily.

Monilia albicans is another common fungus affecting the skin and mucous membranes. In routine diagnostic work M. albicans is not encountered on the skin except in lesions of which it is apparently the cause; however, it is found in the stools in 18 per cent of normal persons. The presence of the organism in the intestine may be the source of the infection in predisposed areas of the skin.

Diabetes, obesity, alcoholism, vascular stasis, excessive immersion in water, hyperhidrosis, and vitamin B deficiency are predisposing factors.

The intertriginous form is fairly common and mainly affects the submammary, gluteal, and inguinocrural folds where warmth, moisture, and maceration of the skin permit the organism to thrive.

About the anus there are whitening and fissuring. Similar lesions may occur beneath the breasts or in the umbilicus. In submammary involvement, as in the groins, the pinkish intertriginous moist patches are surrounded by a thin overhanging fringe of somewhat macerated epidermis.

The type of infection occurring in nursing infants usually commences around the anus, spreading from there to the genitocrural folds and down the thighs. The initial lesions may appear as superficial vesicles, vesicopustules or erythematosquamous macules. These lesions tend to coalesce forming confluent patches.

Lesions may be produced on the buccal mucous membrane by monilia and are known as thrush. Clinically the condition manifests

itself as whitish membranous patches or plaques on the tongue and mucosa of the cheeks. The lesions may also take the form of an erythematous scaly dermatitis known as perleche which is found around the corners of the mouth.

On the finger webs monilia produces an oval-shapped area of macerated white skin. As the condition progresses the macerated skin peels off, leaving a painful raw, denuded area, surrounded by a collar of overhanging white epidermis. It is nearly always the web between the middle and ring fingers that is affected. The condition is called erosio interdigitalis.

Infection of the tissues surrounding the nails is fairly common in females and those whose hands are frequently immersed in water. Manicuring of the nails after washing frequently produces the original abrasion which serves as a portal of entry for the monilia. The condition produces a painful, bolster-like swelling of the nail wall. The nail itself may become affected and become lusterless, furrowed, thickened, discolored, and brittle and may be raised from the nail bed.

The best local remedy for Monilia infections is a two per cent aqueous solution of gentian violet. Intramuscular injections of crude liver extract supplemented by vitamin B complex, particularly nicotinic acid, orally, are valuable adjunctive measures.

Last in this group of common fungous infections is ringworm of the scalp, an infectious disease occurring principally in school children. The clinical picture shows one or more circular bald patches with mild erythema, scaling, and crusting. The hairs in this area become loose and break off just above the skin surface, leaving stumps about 3 mm. long. Less commonly the patches may show follicular pustules, or they may form isolated, fluctuating, indolent abscesses, or be collected into an inflammatory swelling known as a kerion.

Ringworm of the scalp may be caused by either the human type (M. audounin) or the animal type (M. lanosum). Infection with the human type is transmitted from child to child and tends to disappear spontaneously at puberty. The human type is very resistent to treatment, usually requiring x-ray epilation to effect a cure. The animal type which we see in abundance is usually acquired through contact with an infected cat or dog. Differentiation requires cultural studies. A diagnosis of tinea capitis can be established by microscopic examination of a broken hair from the bald patch. The specimen should be allowed to soak for 10 to 15 minutes in a 30 per cent solution of potassium hydroxide. A cover slip is then applied with pressure and the specimen examined with the low power lens. The infected hair will be found invaded throughout with myriads of tiny bead-like spores. Another aid in diagnosis is ultraviolet light passed through a Woods filter composed of glass containing nickel oxide. Under this light infected hairs appear as short, luminous, bright yellowish-green stubs. This lamp is valuable in detection of both early and advanced cases as well as in determination of cure.

As fungi flourish only in keratinized (dead) material they grow along the corresponding portion of the hair follicle. It is evident, then, that to treat this disease successfully the organism must be dislodged by the complete removal of the affected hairs. Sometimes this is accomplished spontaneously by means of an inflammatory reaction around the hair follicles; but in many cases it is necessary to aid the process by mechanical, chemical, and, in special cases, by x-ray epilation.

Routine treatment consists of the following measures applied over a period of two or three months:

1. The hair of the scalp is clipped off short or shaved.
2. Daily shampoo of soap and water is given, the chief purpose of which is to remove crusts, scales, and loose hairs.
3. An antiparasitic preparation is massaged vigorously into the scalp twice daily for several minutes. The physician has the choice of several remedies, one example of which is two per cent iodine crystals, three per cent potassium iodide in equal parts of goose grease and lanolin.
4. Wear a skull cap fashioned of material that can be sterilized, i.e., a stocking.
5. In the course of treatment, filtered ultraviolet is used to check progress and to determine when cure has been accomplished.
6. Diseased hairs are epilated when necessary.

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THE USE OF CURARE IN ELECTRIC SHOCK THERAPY*

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While the drug curare has been known for centuries, and has been commonly used in experimental physiology for many years, it has not come into widespread clinical use until the present decade. In 1940 Bennett[1,2] pioneered in the use of this drug as a means of reducing traumatic complications in convulsive shock therapy, and soon reliable standardized preparations were available. Since that time it has been widely used, not only for this purpose, but also to improve relaxation in anesthesia, as an aid to physical therapy in various muscle disorders, and in a number of other clinical procedures. The purpose at this time is to review the method of administration of this drug and the advantages of its use in electric convulsive therapy of mental disease.

The present series represents a group in which the drug was routinely used. The technique of administration was similar to that outlined by Bennett and various other workers in the field. The product used is the commercial Intocostrin, prepared by E. R. Squibb and Son, containing 20 units of curare per cc. While the suggested maximum dose is ½ unit per pound of body weight, ordinarily a dose somewhat smaller than this has been found satisfactory in this study. Women usually require a proportionately smaller dose than men, and certain allowances are made for obesity and the general physical condition of the patient. The drug is administered intravenously, slowly, and with a small needle, so that a minimum of one and one-half to two minutes elapses during the administration.

It is well known that certain individuals, particularly those suffering from myasthenia gravis, are extremely sensitive to curare. It has been pointed out by Eaton[3] and others that subclinical or unrecognized cases of this disease present definite hazards in the use of the drug. For this reason certain extra precautions are taken the first time a patient is treated. The patient is questioned for symptoms suggesting myasthenia, and a small test dose of not more than 20 per cent of the estimated total dose is given first, following which the patient is observed for a full two or three minutes for possible exaggerated effects. After the test dose has been administered the remainder of the initial dose is given quite slowly with an eye on the watch, another two or three minutes being allowed to elapse, and the patient is observed carefully for the effect produced. The treatment is not given for a full two minutes more, by which time the effect is approaching maximum. The total dose on the first administration is considerably less than the estimated maximum dose, ordinarily being about two cc. in the average female and somewhat more in the male, depending upon the body weight and the muscle build. The patient ordinarily develops muscle weakness perceptible first in the extraocular muscles as diplopia, ptosis, nystagmus, and weakness of rotation. The facial and body muscles are also weakened and there may be a sensation of tightness in the throat and huskiness in the voice. Weakness of the neck muscles develops and ordinarily the dose is felt adequate when the patient can barely raise his head from the bed or is unable to do so. Larger doses produce increasing weakness and eventually paralysis of the skeletal musculature and finally paralysis of respiration. In the event of overdosage and respiratory paralysis the patient should be treated by artificial respiration and the administration of intravenous prostigmine, the antidote. Fortunately, in this group there were no cases where respiratory paralysis developed. Due to weakness of the pharynx and tongue, a partial obstruction of the air passages has occurred two or three times, but was helped by holding the jaw forward. Never was the paient felt to be in real danger, although oxygen has been used a few times to shorten the period of cyanosis. As a safety precau-

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tion, an airway, ampules of prostigmine and adrenalin, and a tank of oxygen are kept readily available. Perhaps it would also be wise to add a tracheal intubation set to this list of emergency equipment. It has not been found necessary to give doses of curare approaching the danger point in order to protect the average patient from injury during the convulsion. When the desired level of curarization has been obtained electric shock treatment is administered in the usual manner.[4]

Once the proper dosage for a patient has been worked out in the first one or two treatments, the total dose is administered in about two minutes, and after a two-minute waiting period, the treatment is given. Following the termination of the convulsion, the patient is roused and asked to raise his head and ordinarily can do so with ease. He is not left alone for some time, although the danger period seems to be over as soon as the patient can respond.

The pharmacological action of curare is well known.[5] The drug inhibits the action of acetylcholine at the motor end plate, thus preventing the transmission of the nerve impulse from the motor nerves to the muscles and producing a flaccid paralysis. The drug is quick-acting, but of short duration, as it is rapidly eliminated. Thus the speed of injection is quite important, since not only does rapid injection increase the degree of muscle weakness, but also it is said to produce cardiac failure in animals, while many times the otherwise lethal dose has been given slowly to experimental animals without fatality when artificial respiration was kept up.[2 6]

The value of this procedure as a modification of the metrazol and electric shock convulsive therapies is obvious. There has been no appreciable change in the effectiveness of these treatments on mental diseases by the use of this drug. Not only is the percentage of traumatic complications reduced in the routine treatment of groups of patients, but patients whose physical condition would otherwise contraindicate convulsive therapy can often be safely treated by this procedure. In a previous report[7] 328 State Hospital patients who received treatment without curare were studied. Of this group seven sustained fractures and two others had re-injury of previous fractures. In this earlier study, as in the present one, routine before and after x-rays were not made, but all patients complaining of pain or otherwise giving symptoms of injury were x-rayed at the time of the complaint. It was found that most of the fractures occurred on the first treatment. Minor complications, such as dislocation of the jaw, occurred in other patients, but were not statistically compiled.

The present series is small, consisting of 55 private patients treated in a general hospital. Most of these patients were suffering from affective disorders. They were given a total of 350 electric shock convulsions, always with the use of curare. In no case has any fracture or dislocation been discovered, and very rarely has a patient even complained of definite pain following the treatment. A few patients have complained of a feeling of tiredness and exhaustion for some hours after treatment, although no definite muscular weakness was demonstrated. Complaints of headache have been fairly common and there have been a few who were nauseated following treatment, but this does not seem to be much, if any, more frequent than in those patients who have not had curare, and is easily relieved by simple medication. One case might be presented as an example of the type patient who might have been denied this treatment:

A 50-year-old male weighing over 200 pounds was suffering from a rather severe depression of some weeks' duration. He had for several years complained of a great amount of backache and was known to have considerable osteo-arthritic changes throughout the entire spine. With each treatment he was given from five to six cc. of intocostrin, at first very cautiously and later in the routine time interval. A good effect was produced and a satisfactory temporary muscle weakness existed. The patient was given seven convulsions at the rate of three a week and at no time during his stay in the hospital, nor in the follow-up period, did he complain of back pain. Even when asked if he had any back pain, his reply was in the negative. A satisfactory remission from his depression resulted from this treatment.

While the advisability of the routine use of curare is still being debated,[8] the literature is filled with reports of both large and small series of patients treated with and without curare, and it is generally agreed that the incidence of traumatic complications and the number of contraindications to treatment can be definitely reduced by the use of this drug. Some have felt that the use of curare also diminishes the risk in patients with hypertension and with cardiac disease, and possibly also those who have had tuber-

(Continued on Page 352)

CLINICAL PATHOLOGIC CONFERENCE

University of Oklahoma School of Medicine

Presented by the Departments of Pathology and Medicine

FLOYD MOORMAN, M.D. AND BELA HALPERT, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HALPERT: In patients with far advanced malignant neoplasms, extensive local invasion coupled with more distant metastases may obscure the point of primary origin. At times it is difficult even for the pathologist to determine the primary site after careful postmortem examination. The case which we are about to present is a real diagnostic problem from this point of view.

We are fortunate in having with us Dr. Floyd Moorman, who will present and analyze the clinical aspects of this case.

PROTOCOL

Patient: B. W. S., white male, age 54 years, admitted September 26, 1946, died October 23, 1946.

Chief Complaint: Mass over right upper chest, paralysis of right arm, loss of weight and strength.

Present Illness: The patient was apparently well until January, 1946, when he noticed sharp pains in the right shoulder region which radiated down the right arm to the little finger. His right hand always seemed cold. He lost weight and strength, and in May, 1946, his local physician performed a tonsillectomy. The postoperative course was complicated by bleeding and the patient felt even weaker. He was confined to bed most of the time. Shortly after the tonsillectomy, a small non-tender nodule was first observed above the right clavicle. This mass gradually increased in size until August, 1946, at which time it began to enlarge rapidly. During this period, the patient experienced occasional slight hemoptysis, some difficulty in swallowing food, and increasing weakness of the right arm. He lost 51 pounds during the course of the illness.

Past and Family History: The patient had an appendectomy in 1923. Past history is otherwise noncontributory.

Physical Examination: The patient was well developed, but poorly nourished. He was ambulatory, but apparently very weak. The skin was loose, warm, and dry. Temperature was 99.4° F. On the right side there was a sinking in of the eyeball, ptosis of the eyelid, and anhidrosis (Horner's syndrome). The mouth was edentulous. There was a firm, non-tender, immovable mass, eight cm. in diameter, protruding four cm. above the level of the chest in the right sternoclavicular region. The skin was not attached over this mass. No pulsation or bruit could be elicited. Breath sounds and tactile fremitus were diminished over the right lung field. The heart was normal to auscultation and percussion. Blood pressure was 120/70 and pulse rate 68 min. The abdomen was not tense or tender and no abnormal masses were palpable. Lymph nodes were slightly enlarged in the left axillary and inguinal regions. The prostate was slightly enlarged. There was complete paralysis of the right arm with moderate atrophy of muscles.

Laboratory Data: On admission, the urine was yellow, cloudy, and neutral, with a specific gravity of 1.015. There was no glucose or Bence-Jones protein but a faint trace of albumin and occasional granular and hyaline casts were observed. R.B.C.'s numbered 4.06 million/cu.mm. with 9.5 Gm. per cent Hb.; leukocytes numbered 11.6 thousand/cu.mm. with 80 per cent neutrophiles, 12 per cent lymphocytes, 7 per cent monocytes, and 1 per cent eosinophiles. The total serum protein was 7.5 Gm. per cent. Roentgenograms of the chest revealed a large soft tissue mass occupying the base of the neck and involving

the right apex. The esophagus was deviated to the left and there was partial obstruction to the passage of barium. A lower intestinal series and x-rays of the skull were essentially negative.

Clinical Course: On October, 1946, bronchoscopy disclosed a mass which involved the anterior wall of the trachea, 26 cm. from the incisor teeth, causing a 50 per cent occlusion of the lumen of the trachea. Material for biopsy was not taken. X-ray therapy was begun on October 3, 1946, but was discontinued after the third treatment because of marked nausea and vomiting. The patient's course was gradually downhill and he died on October 23, 1946.

CLINICAL DIAGNOSIS

DR. MOORMAN: Since all of you have been furnished with mimeographed copies of this case history, I shall not read it again.

There is little question but that the patient suffered from a "tumor" of some sort. It is our purpose to determine the nature of this tumor, whether or not it represented a malignant neoplasm and, if so, the site of primary origin.

This patient, a white male, was 54 years of age. Thus, this individual falls within the age group where cancer is most frequent. According to the story, the first symptom which the patient noticed was pain in the right shoulder region and this radiated down the arm to the little finger. This began 10 months before his death. In May, approximately four months later, he underwent a tonsillectomy. Shortly after this a small nodule developed over the right clavicle. This grew progressively. Was the tonsillectomy incidental, or did it have an effect on the occurrence and growth of this tumor mass? We have observed a few patients with carcinoma of the lung in which polyarthritis, with swelling of affected joints, completed the picture. Such symptoms may, in this case, have led to the removal of tonsils as a possible focus of infection.

Our primary concern, however, is with the intrathoracic tumor mass, the existence of which has been well established by x-rays, etc. It appears that all of this patient's signs and symptoms are probably related directly to this tumor. Could an aneurysm be responsible for this picture? Because of the location, one would consider an *aneurysm of the subclavian artery*. This would most likely be of syphilitic origin and accompanied by positive blood serology. Then too, one would expect pulsation or a bruit and evidence of pressure atrophy and necrosis of the clavicle and/or sternum. It seems more likely that this is a malignant neoplasm. At this site there are may possibilities to consider. It might be a *mediastinal sarcoma* or perhaps it arose from nervous tissue, bone, cartilage, or the thymus gland. The x-ray picture is not typical of a primary mediastinal neoplasm, nor does it support origin from bone or cartilage. A third possibility concerns lymphoblastic tumors. If this were *Hodgkin's disease* one would expect more obvious involvement of cervical and mediastinal lymph nodes. *Lymphosarcoma* should be considered also, but the failure to respond to x-ray therapy is good evidence against this (and against Hodgkin's disease too).

From the symptoms presented in this case and the physical findings, it appears most likely that the tumor originated in the apex of the lung. Progressive growth of a tumor in this location, with infiltration and pressure on the regional nerves, could readily explain the occurrence of Horner's syndrome. Sharp pain and tingling, radiating down the right arm to the little finger, would be an effect of involvement of the brachial plexus and the ulnar nerve. Pancoast was the first to describe the clinical syndrome which bears his name and which corresponds to the picture this patient presents. It is also called *superior pulmonary sulcus tumor* in that it arises in the apical portion of the lung and extends upward through the parietal pleura to involve cervical and axillary regions. I believe that this is the most likely diagnosis in this case. Additional evidence is furnished by the fact that this neoplasm appeared to be radio-resistant. That is, unfortunately, an outstanding characteristic of bronchogenic carcinoma. We should at least mention the possibility that this intrathoracic tumor might be *secondary to a neoplasm elsewhere.* Carcinoma of the mammary gland, of the kidney (hypernephroma) sarcoma, or malignant melanoma would receive first consideration as primary sites. There is nothing here to support such a consideration.

CLINICAL DISCUSSION

DR. HALPERT: Dr. Bender, there are several additional points about the x-rays which you have just shown. Was the trachea deviated to the right or to the left? Was the tumor mass contained primarily in the apex of the lung? Was there evidence of neoplastic involvement of cervical vertebrae?

DR. BENDER: In these films the esophagus

does not appear to be deviated. At fluoroscopy, the esophagus was deviated to the left and there was partial obstruction. It appeared that the neoplasm involved and was, in part, contained in the apex of the right lung. There is no evidence of osseous involvement.

DR. HALPERT: Dr. Moorman, you have mentioned about all the organs from which this neoplasm might have arisen, except the esophagus. Do you consider this a possible source of origin?

DR. MOORMAN: It seems more likely that the esophageal involvement was secondary.

DR. HOPPS: It seems to me that this man's hemoptysis warrants special consideration. You will recall, Dr. Moorman, that last year when we heard Dr. Everts Graham discuss carcinoma of the lung at a medical meeting in Tulsa, he stressed the fact that the most common course of hemoptysis in the fifth and sixth decades was carcinoma of the lung. Has this been your experience?

DR. MOORMAN: It is an important point and a common symptom of bronchogenic carcinoma. In approximately 70 per cent of cases there will be hemoptysis. Since these tumors usually arise in the mucosa of a major bronchus, and since they usually ulcerate, hemorrhage with hemoptysis naturally follows. In any individual past the age of 40 who has hemoptysis, carcinoma of the lung should be considered the most likely possibility.

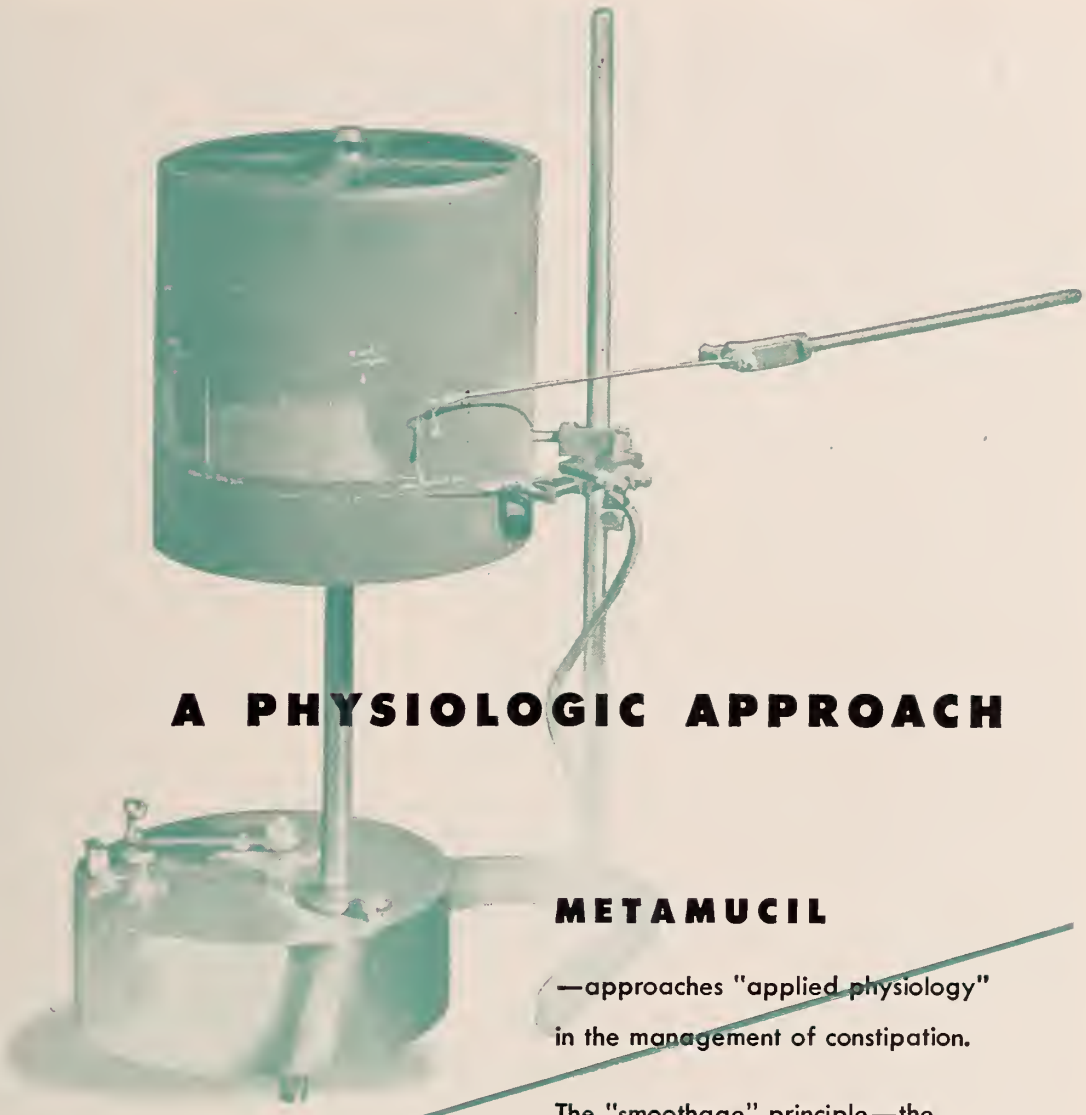
ANATOMIC DIAGNOSIS

DR. HALPERT: At necropsy, this markedly emaciated white male was estimated to weigh 90 pounds. Before his illness he was said to weigh 160 pounds. A decubitus ulcer over the left buttock was additional evidence of marked malnutrition and debility. The abdominal cavity was not remarkable nor were there significant abnormalities of abdominal viscera. The left pleural cavity was almost completely obliterated by old fibrous adhesions. Several subpleural calcified nodules, averaging 0.2 cm. in diameter were present in the medial portion of the lung, suggesting old, inactive tuberculosis. The left lung was moderately increased in weight and presented areas of lumpy induration which were reddish-purple. Considerable frothy fluid exuded from cut surfaces. Histologic examination confirmed the diagnosis of bronchopneumonia. Just above the bifurcation of the right anterolateral wall of the trachea, there was an area, three cm. in diameter, of slight nodular elevation. There was no apparent ulceration of the mucosa. The anterior portion of the upper right pulmonic lobe was densely adherent to the parietal pleura over an area six cm. in diameter. In turn, this portion of the anterior chest wall was densely infiltrated by neoplasm and bulged into the substance of the lung proper. It was contiguous with the tumor mass, eight cm. in diameter, which protruded three cm. above the surface of the chest in the right sternoclavicular region. Also in direct relation to this tumor mass was an area of neoplastic involvement of the anterior wall of the esophagus. This was five by three cm. in diameter and projected one cm. above the level of the surrounding mucosa. Here the mucosa was ulcerated. The neoplasm involved the entire thickness of the wall of the esophagus, invaded and replaced the manubrium sterni and the anterior portions of the cervical vertebrae. The remainder of the gastro-intestinal tract was not remarkable. Histologically, the neoplasm was quite undifferentiated. Neoplastic cells lay in sheets, strands, or nests, in an abundant fibrous connective tissue stroma. An occasional cell exhibited keratinization. Since this appearance is compatible with either primary carcinoma of the esophagus or lung, it provided little help in resolving the point of primary origin. Upon careful evaluation of gross anatomic relationships, it seems that the primary site was probably the esophagus. The more extensive involvement here (all layers) plus the mucosal ulceration is strong evidence in favor of this view.

Actually, Dr. Moorman's diagnosis of Pancoast's syndrome is correct in the sense that we have a malignant neoplasm which involves the pulmonic apex and the base of the neck. This case is most unusual in that, although signs and symptoms pointed to a pulmonic origin, the tumor actually arose from the esophagus.

Our final anatomic diagnosis was:

1. Carcinoma of esophagus, upper third, squamous cell, with extension to supraclavicular lymph nodes, right, cervical vertebrae, manubrium sterni, brachial plexus, trachea, lung, right apex, and suprarenal gland, right.
2. Atrophy of right arm and Horner's syndrome (clinical diagnosis).
3. Emaciation.
4. Decubitus ulcer of left buttock.
5. Bronchopneumonia, bilateral.
6. Fibrous pleuritis and pericarditis.
7. Calcified nodules in lung, left (presumably tubercles).
8. Old scar of appendectomy.



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RESEARCH IN THE SERVICE OF MEDICINE

President's Page

Members of the Association probably read, with the satisfaction intended to be conveyed by the article, the newspaper story which appeared in The Daily Oklahoman Wednesday, June 25, 1947, announcing the allocation of funds made by the Oklahoma State Regents for Higher Education to the several schools of the Oklahoma State System for Higher Education. The item of particular interest to physicians of Oklahoma related to the allocations made to the University of Oklahoma School of Medicine and University Hospitals (including the School of Nursing), for operation and maintenance during 1947-1948.

The statement made was to the effect that the $290,000 allocated to the School of Medicine was 96 per centum of the amount requested. A similarly complimentary statement (actually 90 per centum allocation of funds requested) was implied as to the high ratio of allocation to request for the Hospitals. Admittedly, the allocations made by the Regents are high in proportion to the requests made of the Legislature *by the Regents* but it is to be remembered — though we are not reminded by the Regents — that their recommended "requests" represent rather significant cut-backs from *the requests made by the dean of the School of Medicine*. The Regents also consider only State Tax funds and not other income, as that from fees paid by students and by patients (inpatients and outpatients).

The tabulation given below presents facts that need to be known and which should be of interest to members of the Association interested in the status, welfare, and future of the University of Oklahoma School of Medicine and University Hospitals.

For the School

	Total	State Funds
Available 1946-1947	$309,685*	$211,714
Requested 1947-1948	438,540	381,248
Recommended by State Regents 1947-1948	397,500**	312,500**
Allocated 1947-1948	360,718***	290,000

* Includes carry over from Army-Navy Programs' fees.
** Includes separate request for $68,560 for School of Nursing, deleted from budget, now returned to Hospitals' budget for operation of the School as a three-year school (five-year degree course "not acted upon" by State Regents), as heretofore.
*** Income increased over previous estimate, possibly more, even, through increased fees if these are approved.

For the Hospitals

	Total	State Tax Funds
Available for 1946-1947	$1,255,953	$ 961,829*
Requested for 1947-1948	1,524,707	1,353,512
Recommended by State Regents 1947-1948	1,345,000	1,170,000
Allocated for 1947-1948	1,285,646**	1,051,687

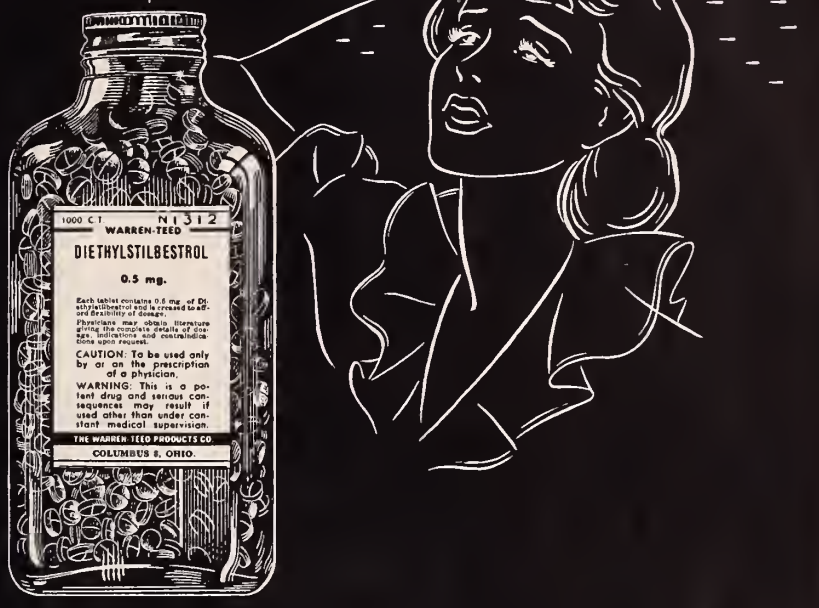
* Includes deficiency appropriations from Governor's Contingent Emergency Fund and special appropriation by Legislature ($276,000 in 1946-1947).
** Income increased over estimate previously submitted.

When one compares the total funds to be available to the School and to the Hospitals (bottom row across in each tabulation) with the amounts originally requested by School officials (second row across), it is seen that there are significant differences ($91,000 less for the School and $302,000 less for the Hospitals, of State funds) that are quite striking when we think of the glowing praise given the State Regents for the allocations of "96 per centum of the requested amounts"!

The School and Hospitals are not supported to the extent needed for modern medical educational standards. Each member of the Association owes it to himself, to his State, and to Medicine to bring these facts to the attention of his legislator.

Paul B Camplin.

President.



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ASSOCIATION ACTIVITIES

A. M. A. CENTENNIAL SEES RECORD ATTENDANCE

A total of 15,667 physicians from all parts of the United States together with distinguished guests from many foreign countries joined in celebration of the A. M. A. Centennial session held June 9-13, 1947, at Atlantic City, New Jersey. Sixty-four Oklahoma physicians registered at the Centennial, and reservations on the Special Train sponsored by the Kansas and Oklahoma State Medical Associations numbered 115.

Chicago was selected as the 1948 Convention City, and dates for the 1948 meeting have been set as June 21 to 25, with the probability that on Sunday, June 20, preceding the first day of the session, there will be various meetings and conferences to be arranged later.

Dr. Edward L. Bortz, formerly vice-president, was inaugurated as the new President of the A. M. A., Dr. Olin West having resigned as President-Elect because of ill health. New officers of the Association for 1947-48 elected at the Atlantic City meeting are as follows:

President-Elect—Dr. Roscoe L. Sensenich, South Bend, Indiana.

Vice-President—Dr. Thomas A. McGoldrick, Brooklyn, New York.

Secretary and General Manager—Dr. George F. Lull, Chicago.

Treasurer—Dr. Josiah J. Moore, Chicago.

Speaker of the House—Dr. R. W. Fouts, Omaha, Nebraska.

Vice-Speaker of the House — Dr. Francis F. Borzell, Philadelphia.

And:

Dr. Dwight H. Murray, Napa, Calif., re-elected to a five-year term Board of Trustees.

Dr. Edward J. McCormick, Toledo, Ohio, elected to a five-year term Board of Trustees.

Dr. James Stevenson of Tulsa, was nominated for membership on the Council of Medical Service, but withdrew his name from nomination and Dr. James R. McVay of Kansas City, Missouri, was re-elected to the Council.

House of Delegates Meets

The House of Delegates held four meetings June 9, 10, 11, and 12, with the Speaker of the House, Dr. R. W. Fouts, presiding. Among the important business carried out by the House was the election of the physician to receive the Distinguished Service Award of the American Medical Association. Dr. R. L. Sensenich, Chairman of the Board of Trustees, reported that the Board had received a list of five names submitted by the Committee on Distinguished Service Award. From these five the Board had selected by ballot the names of Dr. Isaac Abt, Chicago; Dr. Alfred Blalock, Baltimore; and Dr. Henry A. Christian, Boston. The House of Delegates voted upon these three, and Henry A. Christian received the majority of votes cast by the House to receive the Distinguished Service Award.

Appointment of reference committees was made by the Speaker, and James Stevenson, Tulsa, was named as Chairman of the Rules and Order of Business Committee.

Address of President and President-Elect

President Harrison H. Shoulders addressed the House on Monday, the first day of the session, and in his speech reaffirmed the philosophy of medicine, which he described as unchanged, dedicated to progress, service, and freedom. He brought up the problems which are of immediate concern to the medical profession, pointing out that many of these are due, in large measure, to the progress that has taken place in the science and technology of medicine. The immediate and most urgent needs, he said, are concerned with increasing the availability of the services of general practitioners.

In his address to the House, Dr. E. L. Bortz, the President-Elect, recommended the extension of the scientific program, suggesting the possibility of an additional scientific session planned for general practitioners. Other recommendations made by Dr. Bortz, all of which were adopted, were: Rotation of the meeting places of the semi-annual session to bring the resources of the Association to various areas of the nation. Affiliation of medical students and more active participation by them in the activities and privileges of the Association. Further clarification of the public relations activities of the Association, so as to gain cooperation and support of the laity in a modern program for the maintenance of health and control of diseases. Speakers' bureaus for the training of those who are willing to serve their profession as spokesmen before the public, to be organized in every county medical society. Expansion of the Woman's Auxiliary. Establishment of a committee of five to be known as the Committee of Nursing Problems, in recognition of the serious crisis which has developed in the nursing field during the past few years. The building of a new home for the American Medical Association, "a Cathedral of health . . . dedicated to the high service of health maintenance, the prevention of disease, and the extension and enrichment of human life."

Raymond Rich Associates Resign

At the Monday afternoon meeting of the House of Delegates (June 9) a supplementary report of the Board of Trustees was given by Dr. Sensenich, stating that the resignations of Mr. Raymond Rich and Mr. Charles Swart had been accepted by the Board. Raymond Rich Associates was employed by the Board in 1946 to make a survey of the activities of the A. M. A., and Mr. Raymond Rich was employed as consultant by the Division of Public Relations in connection with the Centennial. The Board proposed to expand the public relations program of the Association with relation to its national health program, and will further investigate advisability of arranging for suitable public relations counsel.

Committee on National Emergency Medical Service

The Committee on National Emergency Medical Service presented a progress report incorporating some important recommendations, which were adopted by the House. Serving on the Committee was an Oklahoman, Dr. V. C. Tisdal, of Elk City. The Committee recommended:

I. That the President and Congress be urged (a) that the Surgeons General of the armed forces be given commensurate rank with the chiefs of staff and chiefs of naval operations and take part in all military and naval operations relating to medical, health, sanitary, and welfare services, and in the assignment and utilization of medical personnel at home and abroad; (b) to require that the Secretary of War and Navy consider possible civilian requirements in a total war in the planning, location, and construction of military hospitals, and strive to avoid (1) the medical overstaffing of units;

(2) time wasting performance of nonprofessional duties by a doctor of medicine; (3) the removal of an excessive number of doctors of medicine from civilian hospitals and from civilian practice; and (4) a failure to make assignments, determine rank, and provide for rotation of doctors on the basis of professional qualifications, experience, and age.

II. That the A. M. A. favor the creation of a National Emergency Medical Service Administration to consist of representatives of the Advisory Board for Medical Specialties, American College of Physicians, American College of Surgeons, American Dental Association, American Hospital Association, Catholic Hospital Association, American Medical Association, American Nurses Association, American Public Health Association, American Veterinary Medical Association, and Association of American Medical Colleges.

That the Administration have responsibility for effecting plans for total mobilization of the medical and allied resources of the nation in times of threatened or actual national emergency.

III. That the Board of Trustees be authorized to create and appoint a standing committee to be designated as the Council on National Emergency Medical Service.

IV. That the present Committee on National Emergency Medical Service be discharged.

The report was approved by the Reference Committee and adopted by the House.

A Supplementary Report of the Council on Medical Education and Hospitals was presented dealing mainly with the problem of upholding the prestige of general practitioners.

VA Home Town Medical Care Program

The Council on Medical Service presented a supplementary report, which discussed the Veterans Administration Home Town Medical Care Program. This decentralized, free choice program had been agreed upon by the Veterans Administration and some 38 state medical societies, and provided that the veteran would receive the same care he would receive as a private patient, from a physician of his own choice, with physicians' fees agreed on by the state medical society. The Council however had noted a tendency by the Veterans Administration to set up more and more clinics manned by VA doctors and require veterans to go to them, and that a schedule of fees had been prepared which has all the ear marks of a nationwide schedule of fees. Therefore the Council recommended that it be authorized to set up a conference for the purpose of arriving at a definite policy with regard to this program, to which representatives of each state medical society and the Veterans Administration would be invited to present their views, and following the conference, that the Council be authorized to meet with the Veterans Administration to effect solution of any existing problem. The report was approved by the reference committee and adopted by the House.

Committee on Rural Medical Service

The Committee on Rural Medical Service reported the results of a meeting held May 24, at which the Committee met with an advisory group consisting of representatives of the American Farm Bureau Federation, the National Grange, the Farmers' Educational and Cooperative Union, and the National Cooperative Milk Producers Federation. It was agreed at this meeting that the formation of health councils should be undertaken on the state level and developed on the local level as soon as possible, to organize sentiment for better health standards and initiate necessary measures to secure them. It was believed that the organized farm groups would welcome the initiation of health councils and other health activities by the medical profession.

Committee to Study Revision of Constitution and By-Laws

This Committee reported that under the present Constitution and By-Laws, the proposed revised Constitution and By-Laws would have to lie over until next year, at which time the newly proposed Constitution and By-Laws would be presented to the House of Delegates for final approval.

World Medical Association

Among the many guest speakers from all over the world was Dr. T. C. Routley, representing the Canadian Medical Association and the World Medical Association. Formed in September, 1946, on the invitation of medical colleagues in France and Great Britain, an International Medical Conference was held in London for the purpose of considering the organization of a worldwide medical body. Delegates and observers from 32 national medical associations, including the A. M. A., met together, and it was unanimously agreed to organize a World Medical Association with the following objectives:

1. To promote closer ties among the national medical organizations and among the doctors of the world by personal contact and all other means available.
2. To maintain the honor and protect the interests of the medical profession.
3. To study and report on the professional problems which confront the medical profession in the different countries.
4. To organize an exchange of information on matters of interest to the medical profession.
5. To establish relations with, and to present the views of the medical profession to the World Health Organization, UNESCO, and other appropriate bodies.
6. To assist all peoples of the world to attain the highest possible level of health.

An Organization Committee of 13 members was appointed, including Dr. L. H. Bauer and Dr. E. L. Henderson from the A. M. A. The Committee has met and plans are nearing completion for the World Medical Association to hold its first meeting in Paris, during the week of September 15, 1947. Eighteen medical associations, including all of the larger ones, have signified their desire to become members of this new body.

In connection with the international organization of medicine, the Pan-American Medical Federation is in process of Development, and a report of progress made may be found in the Supplementary Report of the Board of Trustees.

President Truman Sends Congratulations

A letter from President Truman was read, congratulating the American Medical Association on its one hundredth anniversary and extending to the medical profession "the profound thanks of the American people for uncounted services rendered by America's doctors in war and peace. . . . The medical profession has been a primary leadership group in the national scene and the local community throughout this country's history. . . . It is to such social organizations as the American Medical Association that the nation looks for first line defense of democratic principles."

S. 140 and S. 545

In considering resolutions introduced regarding the Taft-Fullbright bill, the Refereuce Committee on Legislation and Public Relations presented a substitute resolution, stating that whereas the bill (S. 140) creates a Department of Health, Education, and Security, and the American Medical Association has repeatedly advocated a National Department of Health with a Secretary of Cabinet rank, that the House of Delegates go on record as opposing portions of the bill tying in education

and security with health, and further resolve that if it is impracticable to establish an independent Executive Department of Health, the House prefers the establishment of a National Health Agency such as proposed in S. 545 rather than an Executive Department in which health, education, and security activities would be combined. This Committee also offered a resolution that the Board of Trustees set up whatever machinery may be necessary to reestablish the public relations organization at the A. M. A. headquarters, in view of the vacancy existing therein, and that the Executive Committee of the Board of Trustees be in charge of public relations until the public relations bureau is reestablished. The report was adopted by the House.

An Oklahoman, Arthur A. Hellbaum of Oklahoma, was elected to Associate Fellowship in the A. M. A., as approved by the Section on Experimental Medicine and Therapeutics.

The address of President-Elect Sensenich closed the final session of the House of Delegates. The spirit of the Centennial was summed up in his words, "I should like to feel that this Centennial Celebration is in a sense a rededication of the efforts of the medical profession of America to maintain the old traditions, the high motivations, and unselfish guidance in directing the progress of medicine and providing public leadership in matters of health."

A. M. A. CONSIDERS PROBLEM OF THE GENERAL PRACTITIONER

(Because of the place of the general practitioner in medicine is fast becoming the object of such concern to the profession in these days of specialization, the following supplementary report of the Council on Medical Education and Hospitals to the House of Delegates of the A. M. A. is being reprinted in full.)

Supplementary Report of Council on Medical Education and Hospitals

Mr. Speaker. The Council on Medical Education and Hospitals has directed me to introduce the following supplementary report:

Considerable thought has been given to devise ways of upholding the prestige of general practitioners so that they may be encouraged to provide the citizens of our country with the kind of medical care which they are peculiarly qualified to furnish and for which there promises to be continued need.

The establishment of a Section on the General Practice of Medicine by this House in 1945 was an important step forward. Interest in this section was at once apparent as shown by the registration of 939 at the 1946 Scientific Assembly and by the attendance of these registrants at the various meetings. This House has also expressed its approval of the organization of sections on general practice in state and county medical societies.

In spite of this, certain hospitals have inaugurated as a matter of policy limitation on their staff appointments to physicians certified by specialty boards or holding membership in certain special medical societies. Such a policy is contrary to the principles of the Council and seems unsound. In publications which have dealt with hospital standards, the Council has expressed repeatedly the need for a hospital staff of high quality; it has never mentioned certification by a specialty board or membership in a special medical society as an important credential.

Certain institutions have assured for themselves the inclusion on their staffs of properly qualified practitioners by the intra-mural establishment of "General Practice Sections." An excellent description of how such a section actually operated over a period of eight years in a 450-bed hospital appeared on pages 15 through 16 of the May 3, 1947, issue of The Journal. Reprints of this article will be distributed by the Council to every registered hospital in the United States.

On the whole, so much uncertainty appeared to exist in the minds of many boards of trustees of hospitals about the propriety of establishing such sections as to lead this House at its meeting in San Francisco a year ago to adopt a significant resolution. This was reported favorably by the Reference Committee on Medical Education and adopted by the House; part of this resolution is quoted:

"WHEREAS, Many hospitals have not established general practice sections in their visiting active staffs and their governing heads are doubtful whether such action has the approval of the bodies which set up the rules and regulations for the approval of their hospitals for interns and residents; therefore be it

Resolved, That hospitals should be encouraged to establish general practitioner services. Appointments to a general practice section shall be made by the hospital authorities on the merits and training of the physician. Such a general practice section shall not per se prevent approval of a hospital for the training of interns and for residencies. The criterion of whether a physician may be a member of a hospital staff should not be dependent on certification by the various specialty boards or membership in special societies."

Copies of this resolution have been sent to the American College of Surgeons, the American College of Physicians, the American Hospital Association, the Protestant Hospital Association, the Catholic Hospital Association, and to each hospital registered by the Council.

To further carry forward the intent of the resolution, the following report was published by the Council in The Journal, page 95, in the May 3, 1947, issue:

LETTER FROM DR. OLIN WEST

June 4, 1947

Paul B. Champlin, M.D., President
Oklahoma State Medical Association

Dear Dr. Champlin:

Your letter of June 3rd, informing me that the Oklahoma State Medical Association, at its Annual Session in Tulsa, had honored me by election to Associate Membership, has just come to hand. My old heart is deeply touched by this kindly action of the House of Delegates and I am very proud to have my name enrolled on the list of Associate Members of the Oklahoma State Medical Association. It means a great deal to a broken down old man like me to be so remembered and so honored by an efficient and progressive organization of physicians like that of Oklahoma.

One of our dearest possessions is the picture presented to us by the Oklahoma delegation at an Annual Session of the A. M. A. held in Chicago. Now the Associate Membership card enclosed with your letter will be added to the list of those things we treasure most highly.

Please convey to the House of Delegates an expression of my heartfelt gratitude and my sincere good wishes for the continued success of the Oklahoma State Medical Association in its efforts "to promote the art and science of medicine and the betterment of the public health."

Incidentally I have not forgotten the helpful kindness of Dick Graham to me at the time the picture was presented. That meant a lot to me, too.

Very sincerely yours
(Signed) Olin West

"At the direction of the House of Delegates of the American Medical Association some years ago, the Council on Medical Education and Hospitals formulated standards for the establishment of American boards for the certification of specialists and for the conduct of hospital residencies providing training in the various special fields of medicine. The aim was to improve the quality of traiuing at this level of medical education. The physician responsible for directing such hospital training should himself have had training and experience approximately equivalent to that required of certification applicants, whether or not he is actually certified. But it was never intended that staff appointments in hospitals generally, or even in hospitals approved for residencies, should be limited to board certified physicians, as is now the policy in some hospitals. Such policies, if practiced extensively, are detrimental to the health of the people and, therefore, to American medicine. Hospital staff appointments should depend on the qualifications of physicians to render proper care to hospitalized patients, as judged by the professional staff of the hospital, and not on certification or special society memberships.

"In this opinion the Council has the full concurrence of the Advisory Board for Medical Specialties, which represents all of the American Boards in the specialties. At the February, 1947, meetings of the Advisory Board it was unanimously voted to adopt as the sentiment and policy of the Advisory Board the recent resolution passed by the American Board of Surgery, which reads:

> 'The American Board of Surgery is not concerned with measures that might gain special privileges or recognition for its certificants in the practice of surgery. It is neither the intent nor has it been the purpose of the Board of Surgery to define requirements for membership on the staffs of hospitals. The prime object of the Board is to pass judgment on the education and training of broadly competent and responsible surgeons — not who shall or shall not perform surgical operations. The Board specifically disclaims interest in or recognition of differential emoluments that may be based on certification.'

"Since February, several separate American Boards in the various specialties have taken similar action. The Council on Medical Education and Hospitals of the American Medical Association is completely in accord with this principle."

The Council now asks authority to use still another lever to carry forward the intent of the resolution. It recommends that Section 3, paragraph 6, of the "Essentials of a Registered Hospital" now reading:

> "6. Staff sections, such as medicine, obstetrics and surgery, should be organized as may seem wise"

to be amended to read:

> "6. Staff sections, such as medicine, obstetrics, surgery, general practice, etc., should be organized as may seem wise."

This amendment is proposed in the belief that even so small a change in wording of the Essentials may be of help in promoting the intent of the resolution adopted by this House a year ago.

The desirability of doing this is plain. The establishment of an American Board of General Practice is being discussed by the Section on the General Practice of Medicine, by the Council and by the Advisory Board for Medical Specialties. The wisdom of establishing such a specialty board at this particular time is debatable. Wider realization and greater use of the contributions which skillful general practitioners can bring to hospitals may make superfluous the need for their certification by a specialty board.

HOSPITAL CONSTRUCTION VIA FEDERAL AID

Congress Must Appropriate Money For Hill-Burton Bill

Many communities and individual physicians have made inquiry concerning the present status of the Hill-Burton Bill, passed by the last session of Congress. The demand in Oklahoma for assistance from the Federal government in the construction of hospitals or health centers indicates that the allotment to Oklahoma of Federal fuuds when made will be oversubscribed.

It is known that the State Hospital Construction Plan will be uuder the supervision of the Commissioner of Health, and in compliance with a request from the Executive Office, the following resume of the provisions of the Hill-Burton Bill and its application to the state of Oklahoma has been released by Dr. Grady Mathews, Commissioner of Health.

Status of the Hospital Construction Program

Under the provisions of Public Health Law 725, pre viously known as the Hill-Burton Bill, or S-191, three basic requirements must be met prior to state participation in the Federal program. First, there must be enabling legislation. This includes the following: The State Agency must be designated as the sole agency to administer or supervise the administration of the State Plan. There must be designation of a State Advisory Council. There must be a hospital licensing law, and there must be enabling legislation to permit participation by the State in the plan. On this first point, all necessary State legislation has been provided aud is now fuuctioning.

Second, a State Plan must be developed and approved by the Surgeon General, showing (1) the development of a hospital construction program and (2) the relative needs determination for the state. According to Dr. Mathews, a State Plan has been developed according to the tentative regulations set forth by the Surgeon General. Copies of the State Plan have been forwarded to the Surgeon General for approval.

Third, actual appropriation of Federal funds must be made whereby each individual approved project will be certified for 1/3 of the total cost of construction. Actual appropriation of funds has not yet been made by the 80th Congress. Formal applications cannot be accepted or considered until definite action regarding funds for providing the one-third grant-in-aid construction cost has been passed by both houses of Congress. Such action may occur either by (a) appropriation of the original proposed allotment of $75,000,000 per year, or a portion thereof, or (b) approval by the Senate of the Labor and Federal Security Agency Appropriation Act which was passed by the House of Representatives on March 25, 1947. The essential features of this Act are as follows: (1) It does not appropriate any specific sum for hospital construction; however, it does (2) provide for approval of projects up to the amounts authorized by the basic Act for appropriation for the fiscal years 1947 aud 1948. Furthermore, (3) the Federal share of such projects becomes a coutractural obligation of the Federal government.

Under this procedure the Federal government may become obligated to pay *up to* $150,000,000 as its share of the cost of approved projects for the two fiscal years. Project applications will be submitted to the Surgeon General through the State Agencies and approved, and the estimate of the Federal share of their cost will be certified to the Secretary of the Treasury. This Federal share is then an obligation of the Federal government.

This obligation of the Government will serve as the basis for a deficiency appropriation, which, when approved will make the money available for payments to applicants in accordance with the Act and regulations.

It must be recognized that this procedure may cause some delay in the time when Federal funds *may* become available to the applicants. However, this should not cause any great difficulty. Under the law applicants must be prepared to meet two-thirds of the construction cost out of their own funds. The fact that approval of their applications creates contractural obligations of the Federal government gives them definite assurance that money *will be* made available to meet the Federal share of such costs. The procedure set up in the Appropriation Act is patterned on one that has proven successful in the program of Federal aid for highway construction.

Thus, it is apparent that joint approval by both House and Senate is essential before either of the two plans for providing the necessary funds can be utilized in implementing the State program. It is hoped, however, that such a decision will be reached in time to coincide with the final approval of the State Plan by the Surgeon General.

NEW MEMBERS

Following are physicians newly associated with their County Medical Societies and the State Medical Association:

George M. Brown, Jr., McAlester
D. W. Humphrey, Cushing
Dick H. Huff, Oklahoma City
John A. McIntyre, Enid
William H. Stover, Oklahoma City

HOW'S YOUR HEALTH?

Tulsa County Medical Society regularly presents its own radio program, "How's Your Health?," broadcast every Tuesday at 3:15 P. M. over Radio Station KOME. The schedule for August and the first part of September is outlined below.

August 12—"Endocrinology," Marvin D. Henley, M.D., Speaker.

August 19—"Preventive Medicine in the Navy," W. D. Hoover, M.D., Speaker.

August 26—"Physical Fitness for All," H. Lee Farris, M.D., Speaker.

September 2—"The Doctor's Part in the War," Thomas J. Hardman, M.D., Speaker.

September 9—"Good Eyes For All," Donald V. Crane, M.D., Speaker.

September 16—"Diseases of the Vascular System," James L. Miner, M.D., Speaker.

This marks the eleventh year that the Tulsa County Medical Society has broadcast its own program.

POSTGRADUATE COURSE IN CHEST DISEASES OFFERED

The American College of Chest Physicians is sponsoring a second annual postgraduate course in diseases of the chest to be held during the week of September 15-20, 1947, at the Municipal Tuberculosis Sanitarium, Chicago, Illinois. The emphasis in this course will be placed on the newer developments in all aspects of diagnosis and treatment of diseases of the chest.

The course will be limited to 30 physicians. Tuition fee is $50.00. Further information may be secured at the office of the American College of Chest Physicains, 500 North Dearborn Street, Chicago 10, Illinois.

FOURTH POSTGRADUATE CIRCUIT BEGINS SEPTEMBER 22

Postgraduate teaching circuit number four, covering Kay, Noble, Pawnee, Osage, Payne, Lincoln, Creek, and Tulsa Counties, will open September 22, 1947. Enrollment cards have been mailed to individual physicians in this area, and it is anticipated that enrollment will be heavy and attendance high. The Postgraduate Committee has announced that percentage of attendance at meetings in the first three circuits has averaged 87 per cent of those physicians enrolled.

Teaching centers in the fourth circuit will be Ponca City, Pawhuska, Stillwater-Cushing, Bristow-Sapulpa, and Tulsa. (Five of the ten lectures will be held in each of the hyphenated cities.) As usual, the course of instruction will be gynecology and will extend over a period of ten weeks, with one lecture each week to be given by J. R. Bromwell Branch, M.D., instructor.

GOVERNOR APPOINTS MENTAL HEALTH BOARD

Appointment of two Oklahoma City physicians to the Mental Health Board has been announced by Governor Roy J. Turner, completing personnel of the Board as provided for by law enacted in the recent legislature. Charles E. Leonard, M.D., Oklahoma City psychiatrist, and W. W. Rucks, M.D., were named by the Governor to fill the two appointive positions on the Board. According to law the Board consists of the Chairman of the State Board of Affairs (W. Russell Borgman) who shall also be Chairman of the Mental Health Board, the State Health Commissioner (Grady Mathews, M.D.), the Dean of the University of Oklahoma Medical School (J. P. Gray, M.D.), and two appointive members — a psychiatrist who must be certified by the American Board of Psychiatrists and a doctor of medicine.

Most pressing task of the Board has been the search for a thoroughly qualified Medical Director whose chief duty will be to inspect the seven state mental hospitals and who will have the authority to make recommendations to the superintendents of the hospitals. Among his duties will be the promotion of a prevention program in cooperation with the Health Department ond the public schools. Appointment of an administrative assistant to the Medical Director has also been under consideration.

MEDICAL FILMS AVAILABLE FROM WAR DEPARTMENT

The War Department has released a list of some sixty films on medical subjects available on a loan basis to the medical profession and allied scientific groups. All are 16 mm. sound films and must be projected on sound equipment. Cost of shipment of the films must be defrayed by the borrower, and showing is restricted to members of the medical profession or allied scientific groups who are bound by professional ethics. No admission fee of any sort may be charged for the viewing of the films.

The State Association Offices have the complete list of film titles and running times, which vary from eight minutes to an hour, and will be glad to furnish further information to County Medical Societies which might be interested.

Typical titles available are: "Amputation of the Lower Extremity," "Thoracic Surgery," "Intravenous Anesthesia," "Radical Orchidectomy," "The Preparation and Insertion of Tantalum Plate," "Plaster Casts," "Schistosomiasis," "Ward Care of Psychotic Patients," and "Plaster Repair of Thigh Stump."

VA EXPANDS MEDICAL PROGRAM IN OKLAHOMA

The Veterans Administration medical program is expanding in Oklahoma as it is throughout the nation.

There are two underlying reasons for the general growth. First is the physical fact that many hundreds of thousands of veterans returned from the armed services during the last two years with disabilities which require prompt hospital care. It is estimated that we now have approximately 20,000,000 veterans in this country, or four times the number following the First World War, and many of these veterans will require medical care and services authorized by law. The second reason for growth is the determination of General Omar N. Bradley, Administrator of Veterans Affairs, and Dr. Paul R. Hawley, the Chief Medical Officer for the Veterans Administration, to give ex-service men and women who need it "medical service second to none." Dr. Hawley, immediately after appointment, instituted a program for increasing the quantity and improving the quality of Veterans Administration service to veterans.

When the quantitative expansion began, Oklahoma had one Veterans Administration hospital — a 418-bed general medical and surgical unit at Mu-kogee. The Veterans Administration has acquired and is now operating the Army's Will Rogers Hospital in Oklahoma City as a 220-bed unit. The real expansion is still in the blue print stage, and includes a 1,000-bed general medical and surgical unit in Oklahoma City and a 750-bed neuropsychiatric hospital in Norman.

That expansion, typical of the national scene, has necessitated a great increase in the medical staff. Within the past year the Veterans Administration has increased the number of its full-time physicians from 2,300 to 5,000. To assure quality in its increasing staff, the Veterans Administration has outlined a program which will be attractive to the highest caliber of medical personnel.

Points in that program, as outlined by Dr. Charles H. Beasley, wartime chief surgeon of the Advance Section in the European Theater, and now branch medical director for the Veterans Administration in the four states of Missouri, Oklahoma, Arkansas, and Kansas, include:

Affiliation with the leading medical schools of the area so that the staffs of veterans' hospitals may keep abreast of major developments in medical science.

Establishment of a continuing educational program for all full-time staff members, giving them the advantages of lectures by specialists among their own full-time personnel and from part-time consultants associated with the VA hospitals.

Use of the best and most modern diagnostic and therapeutic equipment in all divisions of VA hospitals and clinics, permitting research as well as the best possible medical care.

Nor has the VA overlooked the financial aspect in seeking more and better qualified doctors. Salaries for full-time VA physicians now range from $4,149.60 to $11,000.00 annually. Regular pay increases within grade are provided for all VA physicians, along with opportunities to advance to higher grades by improvement of qualifications.

Retirement provisions are similar to those of civil service, five per cent of salaries being used toward building a retirement income. Time served in the armed forces is credited toward retirement. Schedules also have been worked out to assure doctors more regular hours of service in VA hospitals and clinics.

A search for physicians is continuing, Dr. Beasley said. He advised physicians interested in investigating the opportunities of the service to write any VA regional office or hospital, or to the four-state, Branch Office No. 9 at 420 Locust Street, St. Louis, Missouri.

OPS HANDLES 444 CASES FIRST QUARTER OF 1947

The Oklahoma Physicians Service, through N. D. Helland, Executive Director, has released an interesting summary of the 444 surgical cases which it handled in January, February, and March of 1947. O. P. S., which is the prepaid medical care plan sponsored by the Oklahoma State Medical Association, paid out $20,513.00 in doctors' fees during the first quarter of 1947. This amount represented 67 per cent of the total doctors' fees charged members of the plan, amounting to $30,682.00.

To show the remarkable benefits received by the individual policy holder, 53 of these 444 cases (or 11.9 per cent) had been enrolled in the plan only one month when they became cases for surgical care. This group of O. P. S. members incurred surgical fees of $3,299.00, and O. P. S. paid $2,462.00 of this, or 77 per cent of the bill.

ROCKY MOUNTAIN CANCER CONFERENCE

Denver played host to the first Rocky Mountain Cancer Conference held July 9 and 10. This meeting proved to be unusually successful as judged by the attendance and the excellence of the guest speakers, and subject matter discussed on the program. Physicians from all over Oklahoma were present in goodly number combining this fine meeting with the enjoyment of Colorado scenic beauty in summer.

The most important phases of the cancer problem were discussed. Adair pleaded for increasing the amount of teaching of this important disease to medical students. Huggins probably made the most outstanding presentation — a urologist writing chemical formulae, and handling them with the ease and simplicity of a chemist. "The research worker is a gambler," he stated. "After working for six months, six years, or a lifetime he may end up with very little or nothing to contribute." He predicted that probably the solution of the cancer problem may not lie within the realm of surgery or radiant energy, but most likely with internal medicine. The present possibilities are with the radioactive isotopes, Nitrogen mustard, Urethrane, Compound E, Androgenic, Antiandrogenic substances, and the Russian trypanosome extract R&K. Meigs gave a most brilliant presentation of cancer of the cervix and body of the uterus and cancer of the adnexa. Meigs and Adair pleaded with the members of the audience that those inclined to do surgery for malignant disease must seek to perfect themselves in their technique and judgment by attending clinics where outstanding men in their field are doing this work.

Shields Warren, Hugh Morgan, A. W. Oughterson, H. C. Salomon, E. C. Ernst, and E. F. Traub did a most excellent job of making this meeting outstanding.

It was the expressed hope by the guest speakers and the physicians who attended that this be made a regular annual meeting. The sponsors, consisting of Rocky Mountain Cancer Foundation, the Colorado Division of the American Cancer Society, and the Colorado State Medical Society are to be congratulated in planning and inaugurating a meeting of this kind with its appeal to the general practitioner and the specialties.—P. E. Russo, M.D.

CLASSIFIED ADS

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Complete office equipment including instruments, Spencer microscope, Brown-Buerger cystoscope, and Coleman dilators and many others in excellent condition. Contact 7-1991, Oklahoma City, or write care of the Journal.

ERRATUM

The Journal regrets the following error in the article entitled "Five Hundred Fifty-Seven Case Histories of Cervical Disease, 1944-1945," by Kenneth J. Wilson, M.D., and Charles Hugh Wilson, M.D., appearing in the July issue of the Journal. Page 278, right hand column, line 29 reads erroneously as follows:

"It is interesting that the two cases of cervical cancer who had previous hysterectomies for bleeding continued to bleed after those operations but have not apparently been cured by radical conization and coagulation."

This should read:

"It is interesting that the two cases of cervical cancer who had previous hysterectomies for bleeding continued to bleed after those operations but have *now* apparently been cured by radical conization and coagulation."

SHAWNEE PHYSICIAN HEADS STATE TB ASSOCIATION

The Oklahoma Tuberculosis Association, at its annual spring meeting held at Oklahoma City in June, elected the following officers: President, George S. Baxter, M.D., Shawnee; Vice-Presidents, Paul Stephenson, El Reno, and Dr. Oliver Hodges and Grady F. Mathews, M.D., both of Oklahoma City; Secretary, Mrs. Paul Cress, Perry; and Treasurer, J. Henry Johnson, Oklahoma City.

Dr. Baxter is also a member of the Board of Directors of the Pottawatomie County Tuberculosis Association.

CURARE IN ELECTRIC SHOCK THERAPY

(Continued from Page 339)

culosis. Others, however, feel that the drug is of no benefit in these cases, and some[9] believe that it is contraindicated in those patients with previously known heart disease.

There have been a few fatalities[10 11 12] reported with the use of curare and doubtless others exist which have not gotten into the literature. There is no question that there is some risk in the use of this drug, but with the proper precautions this risk can be kept to a minimum.

The importance of the initial small dose for the sensitivity test should be re-emphasized, for while sensitive persons are rare, there can be no doubt that they do exist, and some of the deaths which have occurred were, in all probability, due to a sensitivity to the drug and might possibly have been prevented by this procedure.

SUMMARY

Three hundred and fifty curare modified electric convulsive treatments have been given to 55 patients in a general hospital without significant complications. By use of this drug, not only is the frequency of injury in such procedures reduced, but patients who might otherwise be denied convulsive therapy can be treated. The drug is unquestionably an adjunct to such therapy and, while its use is not without some risk, it can be safely given if the operator has the proper respect for its potency and observes the proper precautions in its administration.

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Have You Heard?

Robert O. Ryan, M.D., formerly of the staff of the University of Oklahoma Student Health Service, has established a private practice at 209 South Crawford Avenue in Norman. He is an O. U. graduate who interned in Wichita Hospital at Wichita, Kans., and later operated the Fairview Hospital.

C. E. Williams, M.D., of Woodward, will have lots to tell when he returns from the World Jamboree of Boy Scouts in Moisson, France, which he is attending as a physician on the central staff. The Jamboree dates are August 9 to 18.

New President of the Cordell Rotary Club is *A. S. Neal, M.D.*, of that city.

Harold R. Sanders, M.D., an O. U. graduate of 1943, has become associated with the A. B. Smith Clinic in Stillwater, and will give special attention to obstetric and pediatric practice. During 1944 and 1945 Dr. Sanders was Resident Surgeon at St. Anthony Hospital, Oklahoma City, and during the past two years he served with the Army at the Fort McClellan, Alabama, Regional Hospital where he was Chief of Dermatology.

Roy L. Fisher, M.D., for many years associated with the Frederick Clinic Hospital, will return to private practice in that city soon. Dr. Fisher entered the U. S. Army Air Forces in 1942 and later entered service of the Veterans Administration, assigned to the district at Seattle, Washington. He will be associated with *O. G. Bacon, M.D.*, and *William E. Hubbard, M.D.*, who has been associated with Dr. Bacon in operation of the clinic and is now becoming a partner.

Ralph Meloy, M.D., of Claremore, was recently elected Governor of the 136th District of Rotary International at the Annual Rotary Convention held in San Francisco. Dr. Meloy is a past president of the Rogers County Medical Society. As Governor of the 136th District, he will visit 59 of the Rotary Clubs in Arkansas, Kansas, Missouri, and Oklahoma during the next 12 months and advise and assist the officers of these clubs.

Ralph V. Smith, M.D., of Britton, recently completed his fiftieth year of service in the practice of medicine.

C. E. Lively, M.D., was recently installed as president of the McAlester Lions Club, and *Floyd T. Barthheld, M.D.*, became the second vice-president of that organization.

Fred W. Taylor, M.D., has joined the staff of the Weedn Hospital at Duncan. A graduate of the Oklahoma University School of Medicine, he served 29 months in the South Pacific with a Marine Air Group during the recent war and since leaving the service has been house physician at Wesley Hospital, Oklahoma City.

Marvin S. Terrell, M.D., has opened offices in association with Dr. R. V. Smith at 107 North Edmonds Street, Britton.

The state of Oklahoma has the lowest death rate of the nation, with less than eight people per thousand, as a result of a progressive Public Health program, according to *John Shackelford, M.D.*, of the State Department of Public Health. Dr. Shackelford spoke before a recent meeting of the Sayre Rotary Club.

John G. Gilbert, M.D., formerly of Tulsa, will become associated with *D. R. B. Gibson* at Ponca City. Dr. Gilbert served in the Army Medical Corps and since his discharge in December has practiced in Oak Ridge, Tenn.

Milton Thompson, M.D., of Muskogee, is among the five who are still living of 241 original signers of a petition to incorporate the city of Muskogee in 1898.

Guy B. Van Sandt, M.D., has announced the reopening of the Wewoka Hospital which has been closed during the past two years.

Mark D. Holcomb, M.D., of Enid, recently attended the three-day infantile paralysis clinic held at Stanford University, Palo Alto, California. Dr. Holcomb was sponsored by the Garfield Chapter of the National Foundation for Infantile Paralysis and the Garfield County Medical Society.

N. C. Riley, M.D., formerly of Holdenville, will become resident doctor at the Weedn Hospital, Marlow, it was recently announced.

E. C. Mohler, M.D., was recently elected to serve as Chairman of the Ponca City Chapter of the American Red Cross during the fiscal year 1947-1948.

John E. McDonald, M.D., of Tulsa, recently completed a four-week inspection tour of Eastern medical centers for treating crippling diseases. The trip was made at the invitation of the National Foundation for Infantile Paralysis.

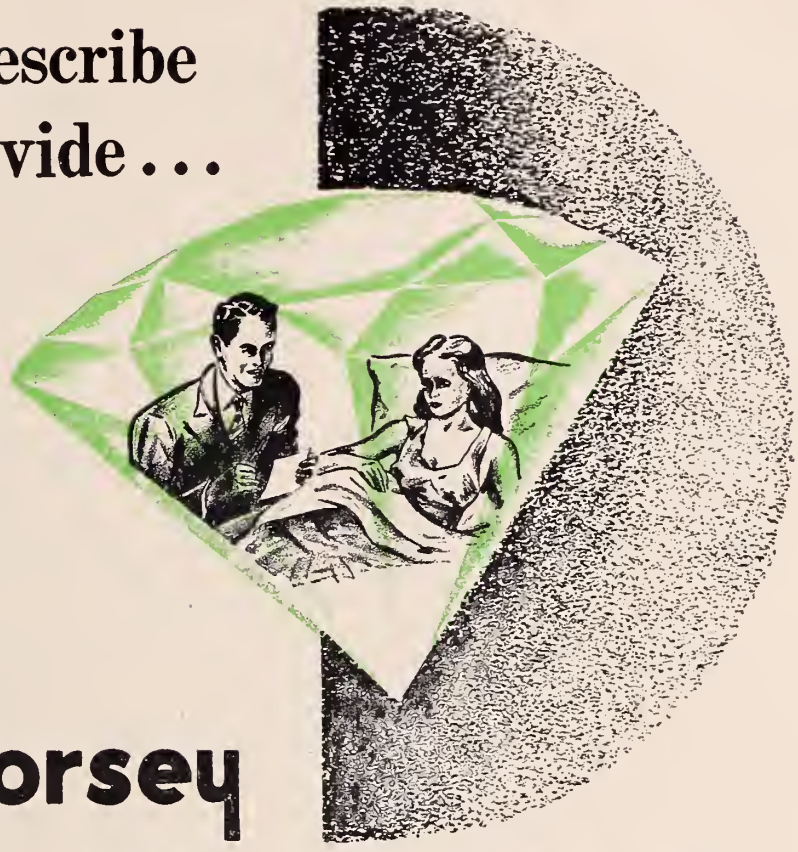
According to the July News Letter of the Oklahoma Society for Crippled Children, the annual report of the Oklahoma Commission for Crippled Children, July 1, 1946, to July 1, 1947, shows a total of 4,247 commitments made for children's care during the year. Of these 951 were crippled children (777 orthopedic cases and 174 plastic cases), and 3,296 were general, including general surgery and medical cases.

T. R. Turner, M.D., of Tulsa, whose scientific paper, "The Use of Curare in Electric Shock Therapy," appears in this issue of the Journal, is the author of "The Epileptic Cripple," which appears in the July News Letter of the Oklahoma Society for Crippled Children.

Approximately $1,000 has been received by the Woods County Medical Society for the purpose of establishing a living memorial to the late *William E. Simon, M.D.*, at the Alva General Hospital. Before his death Dr. Simon requested that money his friends would have spent for flowers be contributed to purchasing something needed for the hospital.

Fred T. Perry, M.D., recently was elected President of the Board of Directors of the Okeene Chamber of Commerce.

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OBITUARIES

Jesse A. Bates, M.D.
1888-1947

Jesse A. Bates, M.D., formerly of Seminole and Chickasha, died June 30, 1947, at his home in Oklahoma City following an extended illness. He was born in Morely, Missouri, on August 17, 1888, a son of the late Dr. Frank Bates, earlyday Coal County physician. Dr. Bates came to Oklahoma after graduating from Dallas Medical College in 1910 and began his practice at Kemp, in Bryan County. He later practiced at Seminole and Chickasha, where he served as a city hospital physician. From Chickasha he moved to Oklahoma City, retiring about a year and a half ago because of ill health. Death was attributed to a heart ailment.

Dr. Bates is survived by his widow Mary; a son Charles F. of the home; a brother, Dr. C. W. Bates, of Oklahoma City; and a sister, Mrs. B. E. Tummins, of California.

David Wiggins Bennett, M.D.
1872-1947

D. W. Bennett, M.D., Sentinel, died July 3, 1947, of a heart attack at a Sentinel hospital. Dr. Bennett was a pioneer physician in his community and was elected to Honorary Membership in the Oklahoma State Medical Association at the 1947 Annual Meeting. He was born November 10, 1872, and received his medical education in Tennessee, graduating in 1900. In 1909 he was licensed to practice medicine in Oklahoma. Only immediate survivor is a brother, W. M. Bennett, also of Sentinel.

Lee W. Cotton, M.D.
1861-1947

Lee W. Cotton, M.D., Enid, died June 15, 1947, at an Enid hospital following a brief illness. He had resided in Enid since 1902, and since 1943 had been an Honorary Member of the Oklahoma State Medical Association. A native of Barnesville, Mo., where he was born in 1861, he received his medical education at the Missouri Medical College, graduating in 1887. Dr. Cotton served for ten years as county superintendent of health and served also as medical examiner for the draft board during World War I. He was a senior deacon in the First Baptist Church of Enid. In 1939 he retired from the active practice of medicine.

Survivors include a daughter, Mrs. Henry B. Storrs, of Enid, and two sons, Doyle W. Cotton of Enid and Cecil W. Cotton of Tulsa.

Robert LeRoy Browning, M.D.
1883-1947

R. L. Browning, M.D., of Pawnee, died June 15, 1947, at an Enid hospital. Born December 10, 1883, he received his medical education in Alabama, graduating in 1911. After practicing in Hartshorne, Oklahoma, he moved to Ponca City, and in 1931 settled at Pawnee where he maintained an active practice until his death. He operated a private hospital until the Pawnee Municipal Hospital was built, when he became surgeon in charge. He is survived by his wife; two sons, Robert, and John S., a medical student at Tulane University; and two daughters.

William Ebert Simon, M.D.
1887-1947

William E. Simon, M.D., Alva, died July 16, 1947, at the Alva General Hospital. He had been in poor health for several years. Born near Troy, Kansas, August 25, 1887, he graduated from the University of Kansas School of Medicine in 1913, and resided at Alva from 1915 until his death. He served in the U. S. Armed Forces in World War I and received a citation for wounds sustained in battle. Survivors include his wife, Mrs. Miriam Simon; two sons William Hale and Robert Bowman; two sisters, Mrs. Gertrude Stewardson, and Gussie Simon; a brother, Charles Simon; and a nephew, Dr. John Simon of Alva.

THE MEDICAL SCHOOL

CALENDAR — AUGUST, 1947

SURGICAL PATHOLOGIC CONFERENCES—Each Tuesday 12:00 Noon to 1:00 P.M.

MEDICAL CONFERENCES—Each Wesdnesday 9:00 A.M. to 10:00 A.M.

CLINICAL PATHOLOGIC CONFERENCES—Each Thursday 12:00 Noon to 1:00 P.M.

TUMOR CLINICS—First and Third Tuesdays (August 5 and 19) 8:00 A.M. to 9:00 A.M.

UROLOGIC-PATHOLOGIC CONFERENCE—Second Tuesday (August 12) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING — Second Friday (August 8) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE — Fourth Monday (August 25) 6:45 P.M. to 7:30 P.M.

Recent visitors at the Medical School were Ross Miller (Med '46), Houston Mount (Med '46), Glen Berkenbile (Med '46), and Jack Downing (Med '46), who have just completed their internships and were reporting for military duty in July.

Cloyce Duncan (Med '46) has just completed his internship at Los Angeles County Hospital and is now employed at Central State Hospital, Norman, pending a call to military duty.

Raymond Hinshaw (Med '46) has just completed his internship and expects to sail in October for England to begin his Rhodes scholarship.

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BOOK REVIEWS

A HISTORY OF THE AMERICAN MEDICAL ASSOCIATION, 1847-1947. Morris Fishbein, M.D., with the biographies of the Presidents of the Association by Walter L. Bierring, M.D., and with Histories of the Publications, Councils, Bureaus, and Other Official Bodies. 1226 pages. Philadelphia and London: W. B. Saunders Company, 1947. Price $10.

This monumental work, beginning with the story of Nathan Smith Davis, "twenty-nine year-old country practitioner" who founded the greatest medical association in the history of the world, and ending with the important publications of the American Medical Association which have encircled the globe and helped to enlighten all civilized nations, should be in every physician's library, on every medical reception room table, and in all public libraries.

Nothing has been more important in the development and progress of this nation than the sustained medical care of its people and the organized pursuit of medical science and public health during the past 100 years under the guidance of the A.M.A. The history of a hundred years of medicine in the United States as manifested through the A.M.A. in one volume must necessarily be brief, yet the story as told by Dr. Fishbein and supplemented by Dr. Bierring's interesting biographies of the presidents gives a comprehensive picture of the founding, purposes, progress, and accomplishments of a great humanitarian organization.

To read the eight-page list of contents would stir the imagination and whet the appetite of all who are interested in the progress of civilization.—Lewis J. Moorman, M.D.

CHEMOTHERAPEUTIC AND OTHER STUDIES OF TYPHUS. Special Report Series No. 255, Medical Research Council. Van den Ende, M., et al. 246 pages, including 54 pages of appendices and 11 plates. His Majesty's Stationery Office: London, 1946. Price $3.65.

This report gives details of attempted anti-rickettsial therapy with sulfonamide derivatives (chiefly V147 and V148). It represents studies since 1941 under the auspices of the National Institute for Medical Research, London. The major portion of the monograph deals with clinical trials of these drugs by the British Army Typhus Research Team in the Mediterranean area. Technical details of interest to the student of typhus are presented, together with the activities of the British wartime investigators of this disease. About one-third of the report is devoted to immunological studies of typhus fever, including the antigenic structure of Typhus rickettsiae. Bibliographies are included.—M. R. Everett, Ph.D.

PRACTICAL PHYSIOLOGICAL CHEMISTRY. Hawk, P. B., Oser, B. L., and Summerson, W. H. Twelfth Edition. Five color plates, 329 illustrations. 1323 pages. Blakiston Co.: Philalephia, 1947. Price $10.

Approximately half of the chapters in this twelfth edition of a valuable reference have been extensively revised and modernized. The new edition contains descriptive material of metabolic phenomena to facilitate its use as a text, but the authors continue to specialize on laboratory procedures, and it is because of the analytical information that it continues to be an important reference for hospital laboratories. Numerous new analytical procedures are described in detail, and some of the older methods have been deleted in order to guide the chemist in his choice of methods.—L. J. Moorman, M.D.

SURGICAL PATHOLOGY. William Boyd, M.D., Dipl. Psych., M. R. C. P. Ed., F.R.C.P. Lond., LL. D. Sask., M.D. Oslo, F.R.S.C., Professor of Pathology, the University of Toronto, Canada. Sixth Edition. 858 pages, with 530 illustrations, including 22 color figures. Philadelphia and London: W. B. Saunders Company, 1947. Price $10.

As surgery progresses it becomes more and more inseparable from pathology. The two are completely dependent upon each other. It is not too difficult a matter to master the more common surgical technics, but to begin to have an understanding of pathology is a life's work.

This text has been an excellent reference since 1925, and the sixth edition brings it entirely up to date. A new section has been added dealing with the pathology and pathological physiology of congenital heart disease. This section takes up the "tetralogy of Fallot," pulmonary stenosis, patent ductus arteriosus, and coarctation of the aorta in a very interesting manner.

Other new additions to this text include tumors of the larynx, Bittner's work on the nursing factor in carcinoma of the breast, cancer of the mouth in relation to avitaminosis, fibrositis of the back, etc.

As most students of surgery already know, this book is very well written and concise. It is highly recommended to the surgical profession at the most up to date and complete text on pathology.—Everett B. Neff, M.D.

CLINICAL LABORATORY DIAGNOSIS. Samuel A. Levinson, M.S., M.D., Ph.D., and Robert P. MacFate, C.H.E., M.S., Ph.D. Cloth, 971 pages with 1942 engravings and 15 plates, seven in color. Pennsylvania: Lea and Febiger, 1946.

This is an excellent informative book covering all commonly used laboratory tests, as well as the more recent additional laboratory procedures such as the Rh factor.

This edition includes a new chapter on "Tropical Medicine" which emphasizes the characteristics of the causative organisms as well as the laboratory procedures utilized in their detection.

The chapter on "Laboratory Methods in Pediatric Procedures" should make this book popular with all pediatricians as well as the clinical pathologists.

Included in the twenty chapters is one on "Legal Medicine and Toxicology," with special emphasis on disease simulating poisoning, as well as the clinical symptoms of poisoning and the laboratory identifications of poisons.

The chapter on hematology alone justifies the publication of the book.

This book is excellent, well illustrated, and presents a great deal of valuable and unusual information.—W. F. Keller, M.D.

DISEASES OF THE CHEST: WITH EMPHASIS ON X-RAY DIAGNOSIS. Eli H. Rubin, M.D., F.A.C.P., F.C.C.P. 685 pages, with 355 illustrations (24 plates in color). Philadelphia and London: W. B. Saunders Company, 1947. Price $12.00.

This work on diseases of the chest with emphasis on roentgen ray diagnosis and a section dealing with the principles of surgical treatment is an excellent text for the general practitioner, medical students, and all physicians interested in bronchopulmonary conditions. The unusually clear roentgen ray reproductions make the book useful not only to the physician interested in diseases of the chest but to the roentgen ray specialist as well.

The list of contents divided into sections gives a comprehensive conception of the methods employed and the anticipated values. The six sections, each exhibiting appropriate subheading, are listed as follows: (1) Diagnosis, (2) Acute and Chronic Pneumonias, (3) Pulmonary Tuberculosis, (4) Diseases of the Lungs and Bronchi, (5) Diseases of the Mediastinum, Diaphragm, Pleura, and Related Structures, Including Heart-Lung Disease, (6) Principles of Surgical Treatment.

This arrangement of the subject matter profusely illustrated with roentgen rays, pathological and hystological specimens, reproductions of Netter paintings of lung specimens, drawings, and tables makes a valuable reservoir of diagnostic, pathologic, and therapeutic knowledge available through an adequate index. The bibliography at the end of each chapter is very helpful.

Quite properly the roentgen ray plays the leading role in the section on diagnoses as in other sections throughout the book, but this reviewer questions the wisdom of placing roentgenology first and symptoms and signs last. The modern physician knows the value of the roentgen ray in diseases of the chest and realizes that it must become a part of every thorough examination, but he is equally conscious of the value of the patient-doctor relationship which should be well established through history-taking and physical examination before mechanical and technical aids enter the field of the patient's consciousness.

There is great advantage in the mutual patient-doctor appraisal which should precede every diagnostic study.

Regardless of this one criticism, the value of this outstanding work on diseases of the chest is so obvious to the careful student of this subject, it must be highly recommended.—Lewis J. Moorman, M.D.

GYNECOLOGICAL AND OBSTETRICAL PATHOLOGY: WITH CLINICAL AND ENDOCRINE RELATIONS. Emil Novak, A.B., M.D., D.Sc. (Hon. Dublin), F.A.C.S., Assoc. in Gyn., Johns Hopkins Med. Sch. Second edition, with 542 illustrations, 15 in color. 540 pages. Philadelphia and London: W. B. Saunders Company, 1947. Price $7.50.

The second edition of *Gynecological and Obstetrical Pathology: With Clinical and Endocrine Relations* by Emil Novak presents this complex subject in a manner that is of benefit to the medical student, the practicing surgeon, and the general pathologist. At the beginning there is a brief review of the endocrinology of the menstrual cycle and gestation which furnishes the reader with fundamentals necessary to the correlation of histological and anatomical changes in the female reproductive tract. Dr. Novak's method of describing the normal histological picture of the various parts of the reproductive tract, as they are taken up, together with the cyclic changes from endocrine influences, impresses the reader with the importance of knowing these are physiological changes and not pathological lesions requiring surgery.

The chapter on carcinoma of the cervix, including his comments on precancerous lesions of the cervix, should be read by every doctor.

The author devotes approximately 150 pages to diseases of the ovary including a chapter on embryology and histology, inflammatory diseases, primary and metastatic carcinoma, Brenner tumors, dysgerminoma, granulosal cell carcinoma, and arrhenoblastoma.

Ectopic pregnancy, hydatidiform mole, and other abnormalities of the placenta and appendages are covered in the same interesting and concise manner that is used throughout the text. The book contains 542 illustrations, 15 of which are in color. All are well chosen and so placed as to clarify the text.

With the increasing interest in pathology that has been stimulated by the various Specialty Boards in the past ten years, this book has its place in the library of every doctor interested in gynecological and obstetrical pathology—Robert B. Howard, M.D.

PNEUMONIA IMMUNIZATION CUTS DEATH RATE OF OLDER PERSONS

A group of New York investigators, who made a six-year study of pneumonia in elderly patients, suggest immunization against the disease where high incidence rates prevail, as in epidemics, in institutions, and in persons with a tendency to recurring pneumonia.

Writing in the current issue of the *Archives of Internal Medicine*, published by the American Medical Association, the investigators — Paul Kaufman, M.D., Attending Physician, Goldwater Memorial Hospital and New York City Home, C. O'Brien, M.D., Resident Physician and H. Stein, M.D., Resident Physician, New York City Home — state that they undertook their study in the older age group for several reasons:

First, they have a high incidence of pneumonia, mortality, and case fatality rate. Second, repeated attacks of pneumonia occur frequently. Third, there was possibility for continuous observation, hospitalization, and reexamination, since the patients were from the New York City Home and the Medical Division of the former Central and Neurological Hospital and the Goldwater Memorial Hospital, where higher age groups are treated.

During the six-year study, 1937-1943, 5,750 patients were immunized against pneumonia while 5,153 control patients were observed for comparison. Among the immunized group 99 developed pneumonia, an incidence rate of 17.2 per 1,000, of which 40 died, a mortality rate of 6.2 per 1,000. There were 227 cases of pneumonia among the non-immunized patients, an incidence rate of 44 per 1,000, with 98 deaths, a mortality rate of 19 per 1,000.

The antigen used in these experiments for immunization is made from a fraction of the pneumococcus, the organism responsible for pneumonia. The antigen, which incites production by the body cells of a substance to fight the bacteria, is a polysaccharide.

MEDICAL ABSTRACTS

FURTHER OBSERVATIONS ON BLOOD GROUPING IN POLIOMYELITIS. Claud W. Jungleblunt, M.D., Harris E. Karowe, and Stanley B. Braham. Annals of Internal Medicine, 26:67-75, No. 1 (Jan.) 1947.

These authors first review the literature to date on this subject and point out the pitfalls in interpreting the available statistics. The data reported in this paper is based on 220 poliomyelitis patients with paralytic involvement. In addition to standard blood groups, subgroups, and saliva secretion of the blood group determining substance was tested for. The results obtained agree substantially with previous work and can be summarized as follows:

"The available data suggests that individuals with blood groups O, A2, and 'nonsecretor' types seem to suffer paralytic involvement in poliomyelitis more often than one would expect from the normal distribution figures for these groups; vice versa, individuals with blood group B and 'secretor' types seem to be somewhat less frequently thus affected as compared with the distribution of these groups in normal population."—W.K.I.

THE ROLE OF MECHANICAL AND ANATOMICAL FACTORS IN THE PROBLEM OF TONSILLAR FOCI. George Revesz. The Journal of Laryngology and Otology, 61:299-305, London, 1946.

Tonsillar foci of infection are of interest for all branches of medicine. Any focal infection will cause general and organic symptoms such as muscular and articular pains, fever, nervous complaints, changes in the blood picture and in the sedimentation rate. Yet it is often difficult to decide whether these general symptoms are caused by the tonsils, which may look almost healthy. Security of such a decision is very much wanted in order to avoid the risk of superfluous operations.

The term chronic tonsillitis covers a series of partly inflammatory progressive, partly regressive reparatory processes ensuing in the tonsils and in the peritonsillar tissues. There are pathologists who say that chronic tonsillitis is a sort of normal defensive mechanism of the body. The normal functions of the tonsils partly consists in neutrolizing microbes or their toxins.

One is justified in assuming that localization or generalization of an infection in the tonsils depend on the immuno-biologic conditions, constitution of the organism, species, and virulence of the bacteria rather than on the local changes in the tonsils. The size of the tonsils, their fixation, the content of the crypts their open and closed state, intracapsular phlegmonous processes, etc., may be additional factors in developing a general infection. Simultaneous action of several components may account for the focal infection and the changes following thereafter.

In the author's opinion the lodging of the tonsils between the palatal arcs, and mechanical factors also play a role in the focal infection. In all cases of focal infection due to tonsillitis the removed tonsils were found lodging deep between the palatal pillars. Normally, the tonsils are steadily exposed to manifold pulling and pressure effects acting in various directions. During deglutition they are dislodged by the action of various muscles, and their contents are expressed by various pulling and pressing movements. In case of deep-seated tonsils such as a massaging effect does not develop during deglutition. Since the two pillars come in close contact, the contents of the crypts may be pressed toward the capsule.

The movement of the cryptal contents toward the capsule of the tonsils may account for a focal infection. —M.D.H.

PRACTICAL POINTS IN WOLFE GRAFT TECHNIQUE. Lt. Col. D. W. Macomber and Capt. S. K. Wynn. Surgery. Vol. 21, No. 1. January, 1947.

"The utilitarian value, functional and cosmetic satisfaction of the Wolfe graft have become more appreciated incidental to the innumerable indications for its use in definitive war surgery.

"Since its limitations are so definite, the technique so exacting, and its success so dependent upon observation of the many fine considerations in its management, we feel that a record of observations in one hundred or more cases may constitute a helpful guide to those who are interested in application and improvement of this type of graft."

The authors call attention to many important points under the following subjects:

a. Choice of donor site.
b. Recipient site.
c. Technique.
d. Post-operative care and complications.

The article is well illustrated and shows excellent results.—J.F.B.

ON MENINGEAL REACTIONS IN SYMPATHETIC OPHTHALMITIS. L. Corcelle. The British Journal of Ophthalmology, 31:366-372, (June) 1947.

The author showed for the first time that meningeal reactions occurred in the course of sympathetic ophthalmia. Extraocular complications of this disease are rather interesting. The following conditions have been associated with sympathetic ophthalmia: deafness, convulsions, derlirious state, spinal syndrome, pains, and fibrillary contractions.

The author reports three cases with typical meningeal irritation. There may be headache of frontal or occipital type. There may be general lassitude, with rise of temperature. The onset of lymphocytic meningitis is indicated by lumbar puncture. The meningeal reaction may perhaps be regarded as contemporaneous with the appearance of clinical signs in the sympathizing eye. The total number of lymphocytes in the spinal fluid appears to be proportional to the intensity of the affection.

The meningitis is not influenced by enucleation of the eye. It may be questioned whether these reactions are constant and specific for sympathetic ophthalmia. Reports of other cases usually did not include examination of the cerebrospinal fluid, but cases seen by the author during the last ten years all showed the meningeal reaction.

The author assumes that sympathetic ophthalmia is a lymphocytic uveo-meningitis due to a filtrable virus of unknown nature. The pathogenetic theories of this disease should be examined in the light of this new symptom.—M.D.H.

KEY TO ABSTRACTORS

W.K.I. W. K. Ishmael, M.D.
M.D.H. Marvin D. Henley, M.D.
J.F.B. John F. Burton, M.D.



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OFFICERS OF COUNTY SOCIETIES, 1947

COUNTY	PRESIDENT	SECRETARY	MEETING TIME
Alfalfa	L. R. Kirby, Cherokee	L. T. Lancaster, Cherokee	Last Tues. each Second Month
Atoka-Bryan-Coal-Johnston	J. S. Fulton, Atoka	A. T. Baker, Durant	
Beckham	O. C. Standifer, Elk City	J. E. Levick, Elk City	Second Tuesday
Blaine	Fred Perry, Okeene	Virginia Curtin, Watonga	Third Thursday
Caddo	George W. Conover, Jr., Anadarko	Edward T. Cook, Jr., Anadarko	Third Thursday
Canadian	G. L. Goodman, Yukon	Jack W. Myers, El Reno	Subject to Call
Carter	J. M. Gordon, Ardmore	C. D. Cunningham, Ardmore	Second Tuesday
Cherokee	P. H. Medearis, Tahlequah	R. K. McIntosh, Jr., Tahlequah	First Tuesday
Choctaw-McCurtain-Pushmataha	Reed Wolfe, Hugo	Fred D. Switzer, Hugo	
Cleveland	Orville Woodson, Norman	T. A. Ragan, Norman	Thursday nights
Comanche	Leslie T. Hamm, Lawton	Byron W. Aycock, Lawton	Third Tuesday
Cotton	G. W. Baker, Walters	Mollie Scism, Walters	Third Friday
Craig	P. L. Hayes, Vinita	J. M. McMillan, Vinita	
Creek	O. H. Cowart, Bristow	F. H. Sisler, Jr., Bristow	Second Tuesday
Custer	Willard H. Smith, Clinton	D. W. McCauley, Clinton	Third Thursday
Garfield	Francis M. Duffy, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	Thomas F. Gross, Lindsay	John R. Callaway, Pauls Valley	Wed. before 3rd Thur.
Grady	R. R. Coates, Chickasha	Wesley W. Davis, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	F. P. Robinson, Pond Creek	
Greer	Dwight D. Pierson, Mangum	J. B. Hollis, Mangum	
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis	First Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams, McCurtain	
Hughes	Clyde Kernek, Holdenville	H. V. Schaff, Holdenville	First Friday
Jackson	E. W. Mabry, Altus	J. P. Irby, Altus	Last Monday
Jefferson	J. A. Dillard, Waurika	O. J. Hagg, Waurika	Second Monday
Kay-Noble	E. C. Mohler, Ponca City	Edwin Yeary, Ponca City	Second Thursday
Kingfisher	John R. Taylor, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	J. Wm. Finch, Hobart	R. F. Shriner, Jr., Hobart	
LeFlore	John H. Harvey, Heavener	Rush L. Wright, Poteau	
Lincoln	J. S. Rollins, Prague	Ned Burleson, Prague	First Wednesday
Logan	James Petty, Guthrie	J. E. Souter, Guthrie	Last Tuesday
Mayes	E. H. Werling, Pryor	Paul B. Cameron, Pryor	
McClain	I. N. Kolb, Blanchard	W. C. McCurdy, Jr., Purcell	
McIntosh	F. R. First, Sr., Checotah	W. A. Tolleson, Eufaula	Third Thursday
Muskogee-Sequoyah-Wagoner	W. P. Fite, Muskogee	William N. Weaver, Muskogee	First Tuesday
Northwestern	Myron England, Woodward	C. W. Tedrowe, Woodward	2nd Thurs. Even Mo.
Okfuskee	L. J. Spickard, Okemah	M. L. Whitney, Okemah	
Oklahoma	F. Redding Hood, Oklahoma City	George E. Kimball, Oklahoma City	Fourth Tuesday
Okmulgee	John Cotteral, Henryetta	C. E. Smith, Henryetta	Fourth Tuesday
Osage	R. O. Smith, Hominy	Gayfree Ellison, Pawhuska	Second Monday
Ottawa	B. Wright Shelton, Miami	W. Jackson Sayles, Miami	Third Monday
Payne-Pawnee	C. H. Haddox, Pawnee	C. W. Moore, Stillwater	Second Thursday
Pittsburg	Homer C. Wheeler, McAlester	Edward D. Greenberger, McAlester	Third Friday
Pontotoc-Murray	E. D. Padberg, Ada	Ollie McBride, Ada	First Wednesday
Pottawatomie	Charles F. Paramore, Shawnee	Clinton Gallaher, Shawnee	1st and 3rd Saturday
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	
Seminole	Claude B. Knight, Wewoka	Mack I. Shanholtz, Wewoka	
Stephens	E. H. Lindley, Duncan	E. C. Lindley, Duncan	Third Wednesday
Texas	Daniel S. Lee, Guymon	E. L. Buford, Guymon	Third Wednesday
Tillman	G. A. Tallant, Frederick	O. G. Bacon, Frederick	
Tulsa	E. O. Johnson, Tulsa	John E. McDonald, Tulsa	Second and Fourth Monday
Washington-Nowata	Thomas Wells, Bartlesville	L. B. Word, Bartlesville	
Washita	A. H. Bungardt, Cordell	Aubrey E. Stowers, Sentinel	Second Wednesday
Woods	C. A. Traverse, Alva	O. E. Templin, Alva	Last Tuesday Odd Months

COUNCILORS AND VICE-COUNCILORS

(Figure indicate year terms expire.)

District No. 1: Alfalfa, Beaver, Cimarron, Dewey, Ellis, Harper, Texas, Woods, Woodward—O. E. Templin, M.D., Alva (C) 1950; O. C. Newman, M.D., Shattuck (V-C) 1950.

District No. 2: Beckham, Custer, Greer, Harmon, Jackson, Kiowa, Roger Mills, Tillman, Washita—L. G. Livingston, M.D., Cordell (C) 1948; O. C. Standifer, M.D., Elk City (V-C) 1950.

District No. 3: Garfield, Grant, Kay Noble, Pawnee, Payne—Bruce Hinson, M.D., Enid (C) 1950; R. W. Choice, M.D., Wakita (V-C) 1950.

District No. 4: Blaine, Canadian, Cleveland, Kingfisher, Logan, Oklahoma—Carroll Pounders, M.D., Oklahoma City (C) 1950; Joe Phelps, M.D., El Reno (V-C) 1950.

District No. 5: Cadda, Carter, Comanche, Cotton, Grady, Jefferson, Love, Stephens—J. L. Patterson, M.D., Duncan (C) 1948; J. Hobson Veazey, M.D., Ardmore (V-C) 1950.

District No. 6: Creek, Nowata, Osage, Rogers, Tulsa, Washington—Ralph McGill, M.D., Tulsa (C) 1949; Ralph Rucker, M.D., Bartlesville (V-C) 1950.

District No. 7: Garvin, Hughes, Lincoln, McClain, Murray, Okfuskee, Pontotoc, Pottawatomie, Seminole—Clinton Gallaher, M.D., Shawnee (C) 1950; Ned Burleson, M.D., Prague (V-C) 1950.

District No. 8: Adair, Cherokee, Craig, Deleware, Mayes, Muskogee, Okmulgee, Ottawa, Sequoyah, Wagoner—J. G. Edwards, M.D., Okmulgee (C) 1948; W. J. Sayles, M.D., (V-C) 1950.

District No. 9: Haskell, Latimer, LeFlore, McIntosh, Pittsburg—Earl Woodson, M.D., Poteau (C) 1948; E. H. Shuller, M.D., McAlester (V-C) 1950.

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THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

WHY DOCTORS DIE

In the August 9 A. M. A. Journal Louis I. Dublin and Mortimer Spiegelman present an exhaustive statistical study of "The Longevity and Mortality of American Physicians, 1938-1942."[1] What physicians live by and how they die would make an interesting story. It could bring to light much otherwise unrecorded courage and fortitude. On the other hand, it would reveal the fact that physicians do not make full use of their knowledge for their own protection. Principles of personal hygiene and habits which favorably or unfavorably influence the tempo of life are often sadly neglected by the physician.

The worthwhile journey through the Dublin-Spiegelman article and a study of the statistical tables should be followed by a careful consideration of the recorded discussion. Here Haven Emerson, a longtime leading exponent of public health, and Louis I. Dublin, the arbiter of the biggest business in the world, built upon a statistician's speculations on life and death, agree and disagree on the physician's advantages and disadvantages in the game of life, their savings and losses because of their attitude toward the normal tempo of life.

For the benefit of those who may not see the A. M. A. Journal, it is interesting to note that longevity and mortality among physicians vary little from that found in the general population, that 91.8 per cent of all deaths result from twenty leading causes. Chief among these are diseases of the heart and coronary arteries, 40.7 per cent, and intracranial lesions, 10.8 per cent. Cancer exacts a toll of 10 per cent and nephritis 6 per cent. Then follow pneumonia and influenza, 5.5 per cent, and accidents, 5 per cent. Tuberculosis accounts for only 1.5 per cent. Arteriosclerosis, diabetes, and suicide each approximate 2 per cent. Other causes run less than 1 per cent.

A survey of the register of licensed physicians in the state of Oklahoma shows that of approximately 1800 physicians in Oklahoma, 98 received their medical degrees before 1896. This would seem to recommend Oklahoma from the standpoint of longevity. Even though Dublin might question this statement, it may be said that fifty years in the practice of medicine equal a hundred years in the ordinary walks of life.

1. Louis I. Dublin, Ph.D., and Mortimer Spiegelman: Longevity and Mortality of American Physicians, J.A.M.A., 134: 1211-1215, (Aug. 9) 1947.

IN HIS IMAGE

The English writer J. B. Priestley in his book, *Out of the People*, says, "It is impossible to believe that men have immortal souls, and still to think of them as masses." That man is "only a little lower than the angels" was not said of the herd.

Only the free soul bears the image of Jesus Christ, the greatest individualist in the history of the world. He would have spurned the directives of the bureaucrat. While democracy may lack certain virtues, it is much better than socialism or communism, where the average individual becomes a cipher.

Samuel Wells, who is supposed to know much about Russia, writes about this nation's two stories, "the story of her great, warm people, and the story of the cold bureaucracy of lies and murder that grips the people's lives." He says, "You can't know a jail without having seen the prisoners."

Compulsion and freedom have nothing in common, socialism and democracy are equally incompatible. The man who yields to bureaucracy cannot hope to direct his own life according to the pattern conceived by his conscience. The trend toward socialism in the United States continues to threaten indi-

vidual freedom. The constant undertow threatening to engulf medicine as a free enterprise and the ever-recurring political agitation of compulsory health insurance represent the power of this undertow and should place a free people on guard. Physicians should constantly warn their patients and their friends against the loss of personal freedom and national sovereignty. It was socialism that brought Hitler to his full power. It was free enterprise in the U. S. that ended his reign of terror.

PROPAGANDA AT THE TAXPAYER'S EXPENSE

Soon after the editorial "In His Image" was written, the American Medical Association Journal of August 9 appeared with a leading editorial entitled "Propaganda Activities of Government Agencies." This editorial calls attention to the fact that the following agencies are devoting money, time, and socialistic talent to spread propaganda in favor of compulsory health insurance, "the U. S. Public Health Service, Children's Bureau, Office of Education, U. S. Employment Service, Department of Agriculture, and the Bureau of Research and Statistics of the Social Security Board."

This information is not surprising to those members of the medical profession who have followed the national public health activities under the New Deal. How can the physicians and other good citizens of a sovereign state continue to sacrifice their freedoms to these government agencies when it is known that some of them are clandestinely working against their cherished liberties? When will some state medical association have the courage to insist that the State Health Department with its county units make its own plans, pay its own way, and tell the government health agencies to pack up their subsidies and beat it back to Washington?

When Haven Emerson said to a public health group, "You must remember that nothing ever comes down to you from Washington that hasn't gone up to Washington from you," he might have added that "by the time it gets back to you fifty cents on the dollar has been spent to rob you of your freedom." If the states were courageous enough to refuse money from government agencies, soon the national debt could be retired and taxes cut half in two. Then honorable citizens could look bureaucrats in the face and tell them to go home and go to work. In America it is still possible to make an honest living and to let charity begin at home without organized aid from outside agencies.

THE SINISTER DOLE

The editorial on "Propaganda at the Taxpayer's Expense" was written before the University of Oklahoma School of Medicine announced the postgraduate course in pediatrics under the auspices of the Children's Bureau with a $50.00 subsidy for those who attend.

After fighting Government control over medicine in these columns for years, this sop for a gullible profession sears the soul, curdles the marrow, and rankles the flesh. A great State University should find a way to give postgraduate courses without acting under the auspices of a federal agency. The members of the State Medical Association, through their general resources or fees from patients who believe in them, should pay their own way.

Physicians should help preserve freedom and self-sufficiency for the children they are saving. Furthermore, country practitioners unable to attend, osteopaths, chiropractors, Christian Scientists, nature healers, and Holy Rollers should not have to put up tax money to pay prosperous physicians for time spent in postgraduate work — even though the money comes from Washington it belongs to the people who sent it up and it should be spent judiciously for all the people and not for the favored few. This agency of the Federal Government is disregarding the significant statements of Jefferson, "To compel a man to furnish contributions of money for the propagation of opinions which he disbelieves is sinful and tyrannical."

This is not an expression of personal feeling but a protest against a dangerous policy and a lamentable precedent, both of which threaten American freedom. The use of general tax funds for the advancement of professional, or other organized groups, is decidedly un-American. When physicians go to school on public funds, Pandora is chuckling in her box. There was a time when this type of government paternalism would have been spurned.

Those who doubt should read Bancroft's[1] account of Jefferson's struggle (cutting off state support of his own church) for religious liberty in Virginia. What would Patrick Henry say if he were a member of our State Medical Association.

The Freedom Train sponsored by the American Heritage Foundation will be too late if we continue at this rate. Dusting off

the precious documents which have secured our freedom and carrying them to the very doorstep of the common people may help to awaken those who are stuporously groping in the mirage of bureaucracy.

It is a disquieting thought that the bureaucrats who squander our money and rob us of our freedoms are conniving in the shadow of the buildings where these documents are preserved. This is a dangerous time in the history of medicine. If we continue to accept planned gifts of our own money from government agencies, in time, we are sure to give more and more for less and less under a government plan. Too soon this government generosity will be followed by debasing coercion. The New Deal is sprinkling salt on our tails, extending corn in one hand and hiding the bridle in the other. How much longer can we take pride in the American way of life. Are we doing what we can to preserve it?

1. Bancroft: History of the Constitution, Vol. 1, p. 213.

RURAL MEDICINE

At the State Meeting of the Oklahoma State Medical Association Dr. Ned Burleson reported for the Committee on Rural Health. Dr. Burleson's introductory remarks and the Committee report opened the way for a discussion of many important questions. Unfortunately, all the questions cannot be considered in this editorial. The available space will be devoted to the oft-repeated argument that a young physician cannot afford to take his wife and children into the average rural community where social, educational, and cultural advantages are so much below the average level. While in some instances there may be some justification for this feeling, an intellectual rather than an emotional appraisal will eliminate many of the objections. The long-range benefits of rural life for children must not be overlooked. Biologically, children brought up in large cities are inferior to country children, and it has been observed that a child shifted from rural life to residency in a great city immediately manifests a biological decline. The average child is much better off under a beautiful tree than under a crystal chandelier. There is something about intimate contact with nature in out-of-the-way places that makes for moral, physical, and intellectual stamina. There is much to be had in rural communities besides "locusts and wild honey." Robert Burns, Daniel Webster, John Marshall, and Abe Lincoln came from logcabin communities. What young doctor and his wife would not be proud to have their boy grow to such a stature. If they will supply the genes, a good start in a rural community will put the child on the road. It's a wonderful thing to glorify a community with a great name.

*CRYSTAL CLEAR**

Young man, here is the voice of a primitive urge crying from the wilderness. It may be opportunity knocking at your door. If you hear and do not answer the call, mark the date in your diary. Twenty years hence, turn back and check your achievements, consult your conscience, and measure your abiding satisfactions in the light of what might have been. At least this would be an interesting experience.

A plain woman has lost her family doctor. Please note that she understands the ideal patient-doctor relationship. In support of the repeated appeals in these columns, she is allowed to speak:

"I am writing this letter to tell you that we need a Good Doctor in our community. We want a Doctor that enjoys his work and not just out for the *Dollar* But who will take Interest in his Pashions and come when called to Both White and Black. . . . We want a Good Doctor who will share our trubbles and Joys with us. I am Just a old country woman and can't express my self very well But if you every heard Dr. Christian on Wend. Night over KOMA you will know that is something like Our Dr. was. You could always go and talk things over with him and get help. Hopen this reaches a Good Man who is looking for a Place to Practice."

*This letter addressed to the Medical School with a clipping of the family physician's obituary was referred to the State Medical Association Office by Dean Gray. If interested, write Dick Graham, care of the Oklahoma State Medical Association.

STATES RIGHTS AT STAKE

Senator H. Alexander Smith, Chairman of the Subcommittee on Health, has written the governor of each state in the Union about pending federal health legislation. In the course of his discussion he poses two significant questions: "What States would approve a compulsory tax plan such as S. 1320 calls for, with a Government supervised medical service, or what States would prefer the S. 545 plan, leaving to the States the determination of policy — that is, compulsory or voluntary group health plans, etc?"

Governor Turner could de-horn this ugly dilemma by demanding a third choice: "What states would prefer to have no part in a health plan proposed and subsidized by the U. S. government?"

Now is the time to write Governor Turner and Senator Smith.

SCIENTIFIC ARTICLES

MODERN THERAPY OF SINUS DISEASE

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The dismembered human anatomy cries out in despair at attempts to divide and further subdivide the practice of medicine into highly specialized areas. While we may voice our appreciation for the scientific level attained by the various specialties with the disappearance of empiricism and technical primitiveness, the advancement is impeded by the lack of application of the fundamentals of anatomy, physiology, and pathology, and the complacency of the profession in assuming that graduation from a medical school spells finality. The detail pharmaceutical salesman too often constitutes the sole source of graduate education and an imposing office equipment considered the index of skill.

It is self-evident that from a historical point of view, the basis of our specialty was not too thoroughly appreciated and the concepts of etiology, physiology, and pathology were as vague and limited as the therapy was inadequate. In the daily encounters with diseases of the nose and nasal accesory sinuses, the horizon of specialists and general physicians did not exceed the borders of the cavities observed. In most instances, specialists were self-appointed, by virtue of convenience rather than by training and with the limited knowledge gained by short-term courses they were usually content to make diagnoses of more or less local character. Major problems were either not recognized or relegated to the few more fortunate persons who were trained in fundamentals. The specialty has progressed far beyond the scope of the fundamental facts that were once known about them, where armed with a cautery, a spray, and a swab, that was all that was required.

These facts have been stated to emphasize that as long as a specialty is considered a limited field with but a few mechanical procedures at its command, it remains barren of real progress and advancement. When it became recognized that, while specialties dealt with separate fields, the organs or parts involved are neither anatomically, physiologically, nor pathologically independent organs, but are integral parts of the human economy, this very fact laid the foundation for rational approaches to researches which have affected the progress of medicine, and particularly otolaryngology. A biologic fundamental has been substituted for localistic philosophy to place this field in a natural science grouping.

In the light of the foregoing remarks it is apparent that there is need to inventory the patient as a total person. This embodies a careful history, a complete examination, and a competent analysis of the social, psychologic, and economic status of the individual. Only in this manner can the physician be in a position to adequately prevent, alleviate, cure, or rehabilitate his patient. Moreover, rational therapy, whether medical or surgical, is based upon the premise of an inventory of the *total person* (Figure 1).

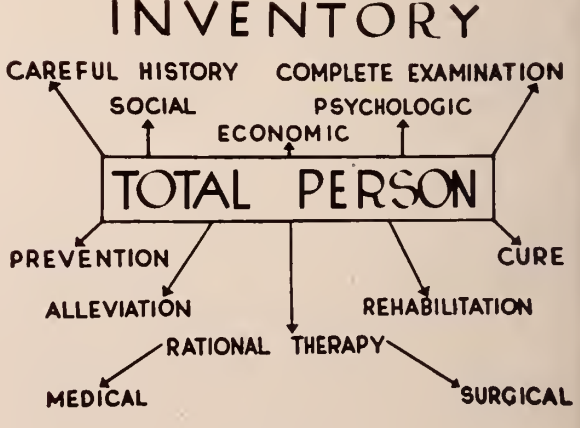


Figure 1.

*Guest speaker at the Annual Meeting of the Oklahoma State Medical Association, held in Tulsa, May 14, 15, 16, 1947.

There can be no hedging as to what constitutes a complete examination (Figure 2).

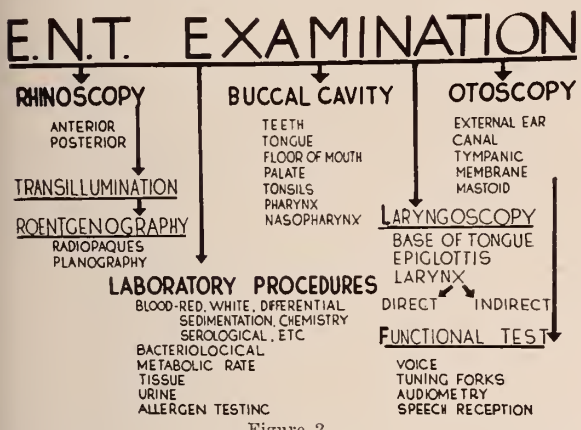


Figure 2.

The proper evaluation of such common symptoms as nasal blockage, headache, and nasal discharge, constitutes a challenging study not satisfied by a superficial and hurried examination (Figure 3). If we are to achieve

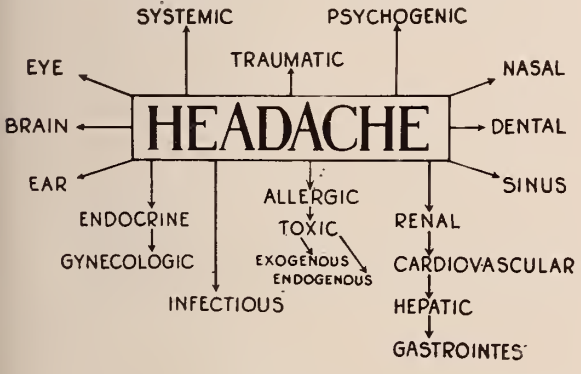


Figure 3.

proper results, we must be cognizant of the fact that there are numerous constitutional disorders manifesting themselves as rhinologic phenomena and that they have a bearing upon almost every specialty. If one remembers that the nose forms the portal of entry to the air passages and therefore, vital in the physiologic and pathologic responses, that its vacular richness makes hemorrhage possible, to say nothing of local, systemic, and intracranial infection, it is not difficult to realize its role in the diseases of the aural, endocranial, ocular, gastrointestinal, renal, dental, pharyngeal, and bronchopulmonary areas, to say nothing of the lymphatic and blood stream infections and destructive osteomyelitis of the skull and facial bones (Figure 4).

The therapeutic approach to sinus disease lies in the physiologic fulfillment of proper ventilation and drainage. No human nose ever achieves geometric structural perfection. The septum in the past few years has received concerted attention and its surgical

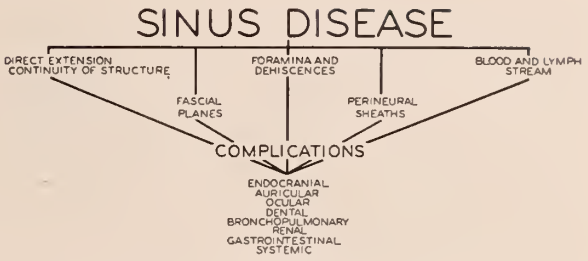


Figure 4.

correction performed by newer technics of a reconstructive nature has been carried out. Cognizance has also geen given to a general plastic reconstruction of the entire structural framework of the nose.

The accessibility of the natural openings of the maxillary, frontals, and sphenoid sinuses have become common knowledge among rhinologists. These sinuses may be approached by specially constructed cannulae, irrigations being the source of great relief to the patient and the avoidance of complications as the result of retention. The less traumatic approach by way of the natural opening of the maxillary sinus in the great majority of patients obviates the necessity for puncture of the sinus. The use of radiopaques via these same natural channels has been productive of information, not otherwise obtainable, relative to the pathologic changes within the sinus cavities. Operative and nonoperative therapy may be based upon such roentgenologic studies.

The employment of combined negative and positive pressure by means of the displacement method (Proetz) has been productive of excellent diagnostic and therapeutic results, particularly of the less accessible ethmoid cells. Specific nasal medication is lacking in rhinologic practice. The use of favorable medicaments narrows itself down to the ephedrine salts. The cilia and mucociliary stream have been carefully scrutinized and along with this are the investigations concerning the chemical characteristics of nasal secretions in health and disease. As a result of the awakened interest in the nose as an organ of defense, it should not be a dumping ground for indiscriminate medication with materials injurious to ciliary activity, nonisotonic and a nonphysiologic pH. There is nothing to indicate that the silver proteinates, penicillin, or the sulfonamides, used locally, have unusual value in the treatment of sinus disease. Furthermore, it is necessary to view with considerable question results reported with these drugs or chemotherapeutic agents locally, unless the pathologic change in the sinus mucosa is defined. Generalization

of the use of the term "sinus disease" is just as indeterminate as the term "arthritis" and "nephritis." Furthermore, the abuse of overtreatment is to be decried just as much as undertreatment or even gross neglect. We are well aware of the nonphysiologic effects of many types of medication upon the essential ciliary activity of the mucous membrane, to say nothing of the adverse action when the 6.5 pH of nasal secretions is violated.

The modern practitioner must be aware of the importance of allergy in the study of rhinologic manifestations, because it is intimately connected with a number of diseases whose nature and management must be understood if local, constitutional, and surgical therapy is to bring about at least a symptomatic amelioration, if not a cure. Many of the vasomotor types of rhinitis associated with intermittent nasal blockage have responded surprisingly well to antihistaminic drugs, pyribenzamine producing the most favorable action without some of the side effects experienced with benadryl.

Metabolic and endocrine disorders, when recognized and treated, may effect a cure without local intervention. Cognizance must be taken of other constitutional problems. The knowledge of vitamin and dietary deficiencies has aided, to some extent at least, the avoidance of a number of infections and the improvement of the local condition. Mineral metabolism, meteorological conditions. occupational tendencies, and habitual excesses of tobacco and alcohol have a definite influence on the incidence and course of sinus disease. It is readily seen that the rhinologist cannot restrict himself to the role of specialist but must either play the part of a competent general physician himself or else secure efficient cooperation.

In accord with the recognition of the relation of structure to function, there has been a praiseworthy trend toward conservatism in the sense of not only avoiding operative intervention whenever at all possible, but in the selection and modification of operations of a less radical nature. The form of operation is dependent upon the following factors: (1) the sinus or sinuses affected, (2) the etiology, (3) the duration of the disease, (4) the tendency and course, (5) the age of the patient, (6) the patient's physical condition, and (7) his social-economic status, with reference to valuable time lost from work.

Perhaps the most striking advance in general as well as special fields of surgery is the utilization of high frequency current for the destruction or excision of benign and malignant neoplasms of the sinuses. In many respects electrosurgery presents superior advantages over classic surgery. Combined radium and x-ray therapy with resection of the affected sinus or sinuses has resulted in a greater percentage of cures than heretofore experienced. The development of surgical technics for the radical removal of large-sized neoplasms which of necessity is followed by mutilization and disfigurement of the face, has resulted in a renaissance of reparative surgery and ingenious prosthetic appliances in the rehabilitation of the patient. The program in plastic reconstruction of anatomic parts represents one of the outstanding achievements in modern surgical practice.

One of the most progressive chapters has been written by the addition of antibiotics to our armamentarium. Sulfonamides, streptomycin, and/or penicillin, when employed parenterally, have spectacularly added to our defense against overwhelming infections due to complications of sinus disease. It must, however, be recorded that the employment of these drugs does not mitigate against the necessity for adequate drainage of an infected focus or for the removal of diseased or osteomyelitic bone. The fallacy of minute dosage has been self-evident. Therapeutic levels are frequently dependent upon different assays and types of penicillin which are the least toxic, 30,000 units every three hours being basic. Side effects of streptomycin must be carefully controlled. In addition to combatting dural involvement, these same chemotherapeutic agents combined with heparin and dicumarol, acting to prevent the spread of septic emboli and in the stabilization of the clot in retarding the coagulation of the blood, have decidedly influenced the prognosis of the heretofore fatal cavernous sinus thrombosis.

From the foregoing we can conclude that the trend for physicians to prepare themselves properly in knowledge of the fundamentals of otolaryngology, has led to a more careful evaluation of the patient as a person, the basic alterations and function of his morphological structures both in health and disease, and the judicious employment of every known and proven mechanical, medical, and surgical aid in the restoration of normal physiology. It is certain that we can continue to look forward to further progress.

THE TREATMENT OF SUB-ACUTE BACTERIAL ENDOCARDITIS*

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Seldom in medicine has there been a discovery which has so profoundly affected the prognosis of a specific disease, as has the use of penicillin in the treatment of sub-acute bacterial endocarditis. It has taken a uniformly hopeless outlook and converted it into a relatively bright future. No longer is the treatment one of despair and irrational procedures. For example, at one time Bier[1] suggested the resection of the breast with searing of pectoral muscles. Another patient received intramuscular turpentine to produce a sterile abscess.[2] Still another was infected with rat bite fever.[3] Drug therapy was equally illogical.

Sub-acute bacterial endocarditis has been defined as an inflammation of the tissue lining the cavity of the heart particularly the valves, produced by a variety of bacteria, and usually superimposed upon a pre-existing injury of the endocardium.[4] A wide variety of bacteria may be responsible, but usually the streptococcus is the prime offender. More specifically the streptococcus viridans will be found in a great majority of cases. However, the staphylococcus aureus, the streptococcus hemolyticus, the meningicoccus, and the pneumococcus, at times, can be the etiological agent. When the infection is produced by the bacillus influenzae it is usually of the non-hemolytic type. The brucella organism can produce sub-acute bacterial endocarditis, and occasionally there will be a mixed infection present.

The effective treatment of sub-acute bacterial endocarditis began with the use of penicillin (1944). Although abortive attempts had been made to cure the disease with sulfonamides, either alone or in conjunction with other forms of therapy, indifferent results had been obtained. Favour et al[5] collected 90 cases treated in Peter Brent Brigham Hospital. Fifty-five cases they felt had had adequate treatment. Out of these 55 cases there were no recoveries in 39 cases treated by sulfonamides alone. In 16 cases treated with sulfonamides and fever therapy four recovered. Vessel et al[6] reported a favorable outcome in a case treated with sulfonamide and urea. It was felt that the urea aided by the inhibition of the anti-sulfonamide substance increased the solubility of the sulfonamide in the blood, prevented the crystalluria, and questionably produced digestion of fibrin and inhibited the coagulation of protein.

The first reports upon the use of penicillin were somewhat discouraging. Unquestionably the early failures can be traced to insufficient knowledge of adequate dosage and lack of uniformity in the earlier preparations of penicillin. Dawson and Hobby[7] treated five cases with small doses of penicillin. Two cases recovered using a constant intramuscular drip of 500,000 units for two to three weeks. Dawson and Hunter[8] were able to report a cure in 30 of 35 patients. Christie[9] correlated statistics from 14 centers, and observed that 81 patients recovered in a series of 147 cases. Another group[10] reported 14 cases fully recovered in a series of 17 cases. Of the other three cases, two died during treatment and the third patient died at home after being discharged as a treatment failure. Priest, Smith, and McGee[11] had 38 patients who have been, or who are now under treatment. Glaser and others[12] felt that they had cure in 18 patients in their series of 28 cases.

Certain fundamental facts must be borne in mind in attempting to treat sub-acute bac-

*Presented before the Medicine Section of the Oklahoma State Medical Association at the Annual Meeting, May 15, 1947.

terial endocarditis with penicillin. It is now recognized that laboratory facilities for identifying the organism, testing the sensitivity of that organism, and checking the penicillin level of the blood are imperative. Unquestionably the in vitro sensitivity of the organism is very important, but serves only as a rough basis for the daily requirements of penicillin. This fact perhaps can be explained by the variance in the growth characteristics of the organism in vitro and in the body. It is generally believed that the blood level should be approximately five to ten times greater than the in vitro sensitivity. Other factors such as the duration of the illness, the presence or absence of complications, the status of the patient, and the type of penicillin fractions used, are important.

In deciding upon the method of administration, an attempt is made to keep the blood concentration at a uniformly high level. At one time it was felt that a fluctuation in the level might be desirable, but I believe such an attitude is unwarranted. Penicillin can be given either intravenously or intramuscularly as a constant drip, or as interrupted intramuscular injections. Priest et al[13] have recommended intravenous drip in sodium chloride. They have shown that with intramuscular doses of as high as 80,000 units every three hours there is a period of 45 minutes to an hour in which the serum level is below in vitro requirements. Occasional positive cultures can be obtained during this period. With larger doses 150,000 to 350,000 units the subminimal or zero levels do not appear. It would seem logical, therefore, to space the intramuscular injections under three hours, probably one and one-half to two hours apart. Continuous intravenous drip has certain inherent difficulties. Constant and special supervision is required. There is danger of thrombophlebitis. Finally, it is uncomfortable to the patient. Many of the difficulties of constant intravenous therapy can be applied to the continuous intramuscular route, although many workers prefer this method.

It is recommended that the daily dosage of penicillin be given in 250 to 500 cc. of normal saline with a number 19 needle inserted into the muscles of the thigh.[14] The site of injection is generally changed from one thigh to the other every three to five days.

While adequate blood levels can be obtained by the intermittent intramuscular route, the wide variance in the recommended number of doses each 24 hours makes it difficult to formulate specific rules. In the light of present knowledge a two-hour schedule should be adequate. Monroe[15] treated a case successfully using intermittent intramuscular route every three hours. Lowance and Jones[16] used the same route every two hours to cure a case complicated by a mesenteric thrombosis. Glaser et al[17] also used the intramuscular route every two hours. Some workers[18] feel that penicillin given every three hours intramuscularly with the addition of several booster shots daily is adequate. Potent preparations of penicillin in oils wil probably reduce the total number of daily injections. Oral therapy is mentioned only to condemn its use at the present time.

The duration of the treatment is a matter of opinion. Most workers feel that a minimum of five weeks should be sufficient, regardless of the daily dosage. However, the time interval recommended has varied from two weeks to several months.

The daily requirement of penicillin given intramuscularly in divided doses will vary with the sensitivity of the organism, and the blood level. Lately there has been a tendency to give larger amounts of penicillin at the onset to overcome the infection early, and to prevent the development of increased resistance on the part of the organism to penicillin. With organisms of low resistance, that is 0.01 units or less in vitro, it is probably safe to begin with 200,000 units, although higher doses are recommended. Flippin et al[19] suggest that 500,000 units be used upon organisms showing a sensitivity of .01 to .05 units. Priest et al[20] feel that 400,000 units to 500,000 units intravenously are required, and that if penicillin is given intramuscularly the minimal dosage is 800,000 to 900,000 units every one and one-half to two hours. It is obvious, therefore, that the dosage recommended varies within a wide range. Daily doses up to several million units can be used with safety if the need arises, particularly with resistant strains of organisms. Certain strains of organisms may be insensitive to penicillin, or be of such high resistance that sufficiently high blood levels cannot be obtained. These organisms should be tested for sensitivity to streptomycin. Although more toxic than penicillin it can be equally effective. I have used streptomycin recently in a case of sub-acute bacterial endocarditis (salvarius) which had relapsed after penicillin treatment. This patient received one-half gram of streptomycin intramuscularly every four hours for 39 days. Clinically he is well

ten weeks later. Also, his blood cultures are negative, the sedimentation rate is not increased, and the leucocyte count is normal.

Lowe[21] has shown that a dosage of 2,000,000 units intravenously is necessary when the infecting organism is the streptococcus, s.b.e., a particularly penicillin resistant organism. Failure to reach a satisfactory blood level with adequate dosage may be avoided by the use of certain drugs as diodrast or amino hippuric acid which act by preventing kidney excretion of the drug. Reduction in the fluid intake below a 1,000 cc. or the use of five or ten per cent glucose with penicillin will produce a higher blood level. The use of penicillin X and the juxtra crystalline penicillin sodium containing 1600 units per milligram is recommended.[22]

It must be remembered that treating the patient with the sub-acute bacterial endocarditis requires attention to general measures governing the treatment of debilitating diseases. High vitamin and high caloric diet with adequate protein intake is necessary. Blood transfusions are helpful. Certainly bed rest is important. Attention to foci of infection must be given. After adequate treatment has been carried out, and the patient appears clinically well, how do we know he is cured? Our criteria for a cure are still very sketchy and incomplete, but persistently negative blood cultures, a falling or normal sedimentation rate, and normal leucocyte count are presumptive evidence of a successful outcome. Failure of the leucocyte count to return to normal, or a rising white count suggests inadequate dosage and treatment should be continued.

It is now apparent that sub-acute bacterial endocarditis can be cured with penicillin, also, that while our information as to adequate treatment is incomplete, nevertheless there are certain clear cut rules that must be followed or failure can be expected.

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PUBLIC EDUCATION ABOUT CANCER BRINGS DIVIDENDS

Large sums of money used in the past few years to educate the public in recognition of the early symptoms of cancer have already shown some effect, according to two members of the Medical Department of New York City's Memorial Hospital.

Writing in the September 6 issue of *The Journal of the American Medical Association*, John E. Leach, M.D. and Guy F. Robbins, M.D., a National Cancer Institute Fellow, report the results of a recent survey of 500 new patients at Memorial Hospital's internationally known cancer clinic. Comparing the results with those of a previous study covering the period from 1923 to 1938, they say that "significant progress is being made — people in this metropolitan area are seeking medical attention sooner."

In spite of this indication of progress, the weak spot in the current drive against cancer is still, say the writers, "in the period before therapy — the lapse of a time between first symptoms and the beginning of treatment. This includes the time from first symptoms to first physician, from first physician to diagnosis and from diagnosis to therapy." Because of undue delay in diagnosis or treatment there has been little real reduction in the rate of deaths from cancer — a reduction made possible through great strides in methods of cancer diagnosis as well as in surgical and radiation therapy.

THE PARENT IN PEDIATRIC PRACTICE*

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Most specialties in the field of medicine deal with specific organ systems. Pediatrics, in contrast, is concerned with the total organism. Devoted at first to the diseases of childhood, it has become increasingly interested in the developmental consequences of diseases. This has naturally led to emphasis on prevention. Problems of behavior in infancy and childhood should be regarded as symptoms of a disease with far-reaching future possibilities, the end results of which are frequently seen in the adults who crowd the waiting rooms of our colleagues in other branches of medicine; in adults who find social adaptation difficult; and these end results again are seen by pediatricians in the second generation of children. These early symptoms are not always obvious. Conscientious attention to child development demands a routine regard for behavior symptoms in private practice. A behavior inventory, as part of every pediatric case record, will disclose many developmental defects and deviations which otherwise might go unnoticed in the usual busy day. Instabilities and emotional abnormalities reveal themselves early when diagnosis is directed to the appraisal of developmental maturity. Emotional development does not take care of itself. In a complicated society it needs to be subjected to periodic diagnosis and supervision. Parental guidance early is the specific preventive.

Who should be better qualified to undertake such periodic check-ups and to provide the necessary parental guidance than the pediatrician?

Further, it takes the pediatrician who is oriented toward development as a dynamic emotional as well as physical force, who has prepared himself to recognize developmental norms in terms of social and emotional maturity at specific age levels. In short, is the child of two years still being fed entirely by his mother as he was at one year? Is the child of five years behaving in his play activity with other children like one might expect the three-year-old to react? Is the six-year-old still being completely dressed by mother?

In considering the total organism, one must include the immediate environment in which, and against which, the organism is reacting. That environment is the home, the parent, even more specifically the mother. It is generally accepted that the most potent of all influences on social behavior is derived from the primary social experience with the mother. Life under a regime of maternal indifference develops a personality pattern of quite a different mold than one under a regime of maternal overprotection. For every infant and child seen in pediatric practice, at least one parent or parent-substitute is also seen. An evaluation of parental attitudes and reactions toward the child should be noted in each pediatric record in order to reflect truly the complete course of development. Some of this may be obtained through direct questioning, but by far the more important leads will be obtained indirectly through spontaneous statements of the mother and through observation of her attitude toward, and relationship with, the child in the office or home. A vivid example is depicted in the opening statement of one mother who has brought her son to the office because of abdominal pain. "He has tummy aches; you know he lies terrible and it takes an hour and a half to break him down." It is just that simple at times to pick up a clue to the emotional tension underlying the somatic complaint, complete examination and laboratory studies revealing no organic cause.

Another mother reveals her rejection of the daughter during the history-taking procedure with the statement, "She's just a source of worry to me all the time."

Many examples of oversolicitude are noted during the course of a history regarding physical complaint, if one seeks pertinent information concerning parent-child relation-

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ships. One such instance revealed a mother who escorted her ten-year-old boy to and from school. Another concerns a pair of parents who so restricted activities that they bestowed an invalid's existence on a healthy boy.

Parents are accepted as sources of information and at time are tolerated as sources of annoyance. Characteristics which may be irritating and annoying in some parents may be turned to advantage by the pediatrician who regards such traits as a stimulus for forther investigation in the interest of the child.

What is the significance of such reaction on the part of the parent?

Why is she so alarmed at the first sneeze, the first sniffle, the unfinished feeding — not once, but repeatedly?

And finally, what are the likely consequences upon the child who is exposed to such basic emotions of this type of adult for 24 hours of every day?

Oversolicitousness by the parent may turn out to be the anxiety and insecurity of a new mother who requires reassurance as to her ability to care for her infant's needs. Or it may reveal a mother who admits she "lives only for her child," has given up all her former interests and activities. Recognition of this latter situation early, and adequate guidance, might have prevented the distressing problem of the 12-year-old boy who was rebellious, defiant, disrespectful to his parents, and who has enslaved his mother through his tyrannical behavior. Had the physician recognized this mother as an overprotective, overindulgent individual who completely surrendered to her infant, he might have been able to orient her properly to the real needs of infants and children growing up in a society such as ours. These needs do not include complete submission of parents to infantile demands. Neither do these needs include complete domination, as we find at the other extreme in the mother who is overprotective in a domineering fashion and who prolongs infantile methods of handling into the older years. The latter is exemplified by the overly submissive child whose emotional and social maturity has been severely stunted; at the age of 13 years he has limited interests, is withdrawn in social contacts, and still is being helped in his dressing by mother, and is punished by being put to bed in the afternoon.

Through observation of the parent's attitude and reaction in waiting room or office much can be learned. A very pretty 10-year-old girl was seen because of anxiety and fear which preceded recitals in which she was scheduled to appear. She had excellent ability but always feared she might make a blunder. She also felt inferior in social relationships. Both parents are intelligent and realized that the child displayed a need for perfection. They protested that they did not expect her to be perfect and continually told her so. However, it was obvious that high achievement delighted them. The girl herself expressed a need for being the best in her class. In her reactions she displayed obvious feelings of self-consciousness and inferiority although she had all the attributes of a superior individual. On the occasion of one visit, the day report cards had been received, both parents were awaiting her. As she left the office her father greeted her in kindly fashion, and when told she had her report card, asked, "Did you make all A's?" This was said in jest but the undercurrent was quite meaningful to the child. Only two-thirds of her grades were "A." The parental attitude toward perfection which the child reflects so strongly in her insecurity is communicated to her indirectly and unintentionally. Only through such direct observation could it have been definitely known and adequately attacked.

Then there is the six-year-old girl whose mother complains of a tense, unhappy home situation, all because of the child's spells of irritability, pouting, and negativistic behavior. During contact with the mother she revealed herself as a rather rigid personality, verbally effusive, impulsive, with a penchant for orderliness. She was distressed because the child had her bowel movements in the afternoon instead of in the morning prior to going off to school. She described her girl's refusal to comply when she told her, "You *must* clean your shoes now." This mother needed a reorientation regarding the relative importance of certain routines and an understanding of the need in the child for the development of independence. Little did she realize how she was thwarting the child's efforts toward self-assertion through her tone of voice, general attitude, and excessive use of direct, imperative commands. The normal degree of negative reaction to be expected in the six-year-old was accentuated and the tension provoked resulted in the child's irritability.

A much happier home relationship resulted from the mother's ability to grasp the true nature of the situation and to alter her basic approach. False notions of parents regarding

health and behavior play a more or less significant role in the development of and management of behavior problems in many instances. It is important that the existence of such misconceptions be recognized. It is of interest to know not only what the actual complaints are, but also what they mean to the parent. Many mothers tell of their child having had a "touch" of this or that disease, or of having been on the "verge" of some illness. Many remarks of doctors to parents, more or less guarded, are frequently misconstrued. Later they may be misrepresented to another physician by the parent. This is a strong reason for doctors talking to patients and parents in terms which can be clearly understood and which leave no doubt. To consider some specific misconceptions commonly entertained by parents, enuresis may be used as an example. Most frequent explanations by parents of the cause of this include weak kidneys, weak bladder, kidney trouble, heredity. Such beliefs would tend to create an oversolicitous and overprotective attitude toward the child with effects far from constructive. The number of remedies and suggestions tried is amazing as one inquires in detail with regard to previous efforts at cure or management. One mother says, "I know that it's just his laziness, so I scold him and whip him every time he does it."

This gives an idea of the amount of time to be spent in re-educating some parents before successful results can be looked for in the handling of enuresis.

Tics, temper tantrums, breathholding spells are frequently blamed on "nerves," "nervousness," heredity. Yet, it is still further significant to learn what the parent means by nervousness. The word serves parents as a sort of diagnosis which vaguely places the cause of trouble somewhere within the child. Such a conception frequently leads to a resigned feeling that nothing can be done about it. The underlying physical basis or emotional tension is frequently unrecognized by parents. Examples of what some parents mean by nervousness are enlightening:

"He's irritable and won't do as he's told." "She's so impatient." "He has to be doing something all the time, is never still." "She scares easily." "He's afraid of doctors."

The conception that masturbation leads to insanity or inevitable ruin of some sort is still widely held among the laity. Children are still threatened with that and told that dark circles under their eyes will betray them to everyone, etc. Such alarming threats are known to result in considerable preoccupation in the child and lead to anxiety, hysterical phenomena, and the like. Measures include, first, reassurance of both parent and child on such points, and then reason for the practice is sought in the physical or psychic spheres.

Speech difficulties are seldom recognized by parents as possibly being due to mental retardation. Stuttering is frequently regarded as "inherited" if they can point to any relative, near or distant, who stuttered at one time or another in his lifetime. Such an attitude naturally impedes recognition of the basic tension-producing factors responsible for the defect.

And now a plea for the better understanding of parents. Confusion and anxiety have been created in many parents as a consequence of our present era of freedom of expression for the child, the right and wrong way to raise a child, etc. Strictness and leniency are problems to the parent. Strictness, as such, may be beneficial or detrimental, depending on whether it stems from anxiety and lack of self-confidence in the parent, or whether it is accompanied by self-assurance and fairness. Leniency may be an expression of parental weakness or a sign of a good parent-child relationship. Thus, the effects of either depend on what underlies it rather than on the definition of the terms themselves.

In efforts directed toward educating and orienting the parent, as far as the needs of his or her own child are concerned, tension should be eased. The mother already has an overdose of guilt feelings in most instances. Blame is to be avoided as well as overt disapproval with the mother's behavior. These should be accepted as the best efforts of which she has been capable. Suggestion for change should come in a positive, friendly, and cooperative fashion, with an explanation of reasons for trying the different approach. If they understand somewhat the reasons underlying the child's behavior as a response to its needs, they can more readily accept suggestion for change in attitude and method.

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THE MENTAL FATIGUE STATES, SYMPTOMS AND DIAGNOSIS*

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The mental fatigue type of mental illness — a definite clinical entity — not infrequently presents itself to the psychiatrist, to the internist, or to the general practitioner, but perhaps less frequently to others. It is interesting that this clinical entity was well described in Diefendorf's[1] interpretation of Kraeplin's work, when as professor of psychiatry at Yale he devoted a chapter in his text book, *Clinical Psychiatry*, to this condition. He named it "Acquired Neurasthenia" and used as a subtitle "Chronic Nervous Exhaustion." In our American civilian life the hard-driving business man or the manufacturer (with the American drive to accomplish) developing the mental fatigue type of illness has caused the term "American Neuroses" to be applied to this type of sickness. During the latter part of, and following, World War I "neurocirculatory asthenia" and "shell shock," terms which probably could be rightfully assigned to certain conditions, were often applied to mental fatigue states. Walter Alvarez has evidently observed the same clinical picture in many patients as he referred to "chronic nervous exhaustion" when in 1942 he wrote his article "Constitutional Inadequacy."[2] In still another article of his, "Diagnostic Time Savers of Overworked Physicians,"[3] he referred to fatigue states and made the wise observation of the symptom which psychiatrists have relied upon for some time when he stated, "It is usually worse in the morning and clears away toward evening, so obviously it is not due to the strain of the day's work."

Early in War II the British described a condition, "Flying Stress," with descriptive terms which would do credit to Diefendorf's "Acquired Neurasthenia." Later on in the War II, and subsequent thereto, both the medical and lay press have used the terms "operational fatigue," "flying fatigue," "tank fatigue," "war fatigue," "combat fatigue," and "combat exhaustion." Under this last term there appeared an article in the *Journal of Nervous and Mental Diseases*, in October, 1946, written by a Commission of Civilian Psychiatrists sent out under the auspices of a branch of the War Department. The Commission was composed of Bartemeier, Kubie, Karl Menninger, Romano, and Whitehorn.[4] These variously named fatigue states of war have been studied carefully and have been accurately described by many. Those amongst us who have treated this condition in civilian life and observed it in military service appreciate that all of these various terms are applicable to one clinical entity. It should be the responsibility of psychiatrists to establish an acceptable name, one which will apply to the condition regardless of whether it appears in civilian or military life, and regardless of what the precipitating causes might be.

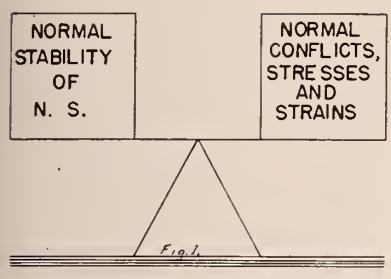
For certain very definite reasons this condition may be interpreted as some form of psychoneuroses or perhaps one of the depressive mental states. Should it occur during late adult or presenile period of life, differentiation from the involutional psychoses must be made. It may be the precipitating factor and usher in a major psychosis. It is interesting that most of our modern text books on psychiatry call attention to, and some even emphasize the "fatigue symptoms," and even by use of the word "fatigue," in describing neurasthenia as one of the psychoneuroses. There is no definite attempt to differentiate between psychoneurotic neurasthenia and the "Acquired Neurasthenia" as the result of mental fatigue. The one symptom observed by Alvarez, when

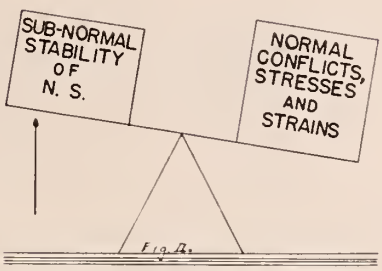
*Presented before the General Session of the Oklahoma State Medical Association at the Annual Meeting, May 16, 1947.

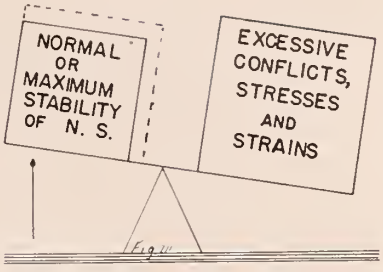
present, would differentiate the two conditions. There are, of course, other points to aid in separating the two conditions. It is possibly true that some psychiatrists do not desire to consider the condition as a separate disease entity. This is true because quite often the mental processes of anxiety, fear, and emotional strain help precipitate the condition. Certainly one could surmise these factors to aid in the development of the various fatigue states in war. Also, when the condition is well established it presents a clinical picture with features common to the psychoneuroses — anxiety, emotional instability, restlessness, fear, and bizarre physical complaints usually being present. The very fact, however, that this mental illness may develop when anxiety, fear, and emotional strain are not precipitating factors, and when there exists only the factor of long hours of concentration, physical and mental work, makes one realize that mental fatigue states exist separately from psychoneuroses. As a military bulletin words it, "The principal cause is time already spent on the job." As an example, a young professional man, established in a thriving community, was very successful in his profession and in his adjustment in the community life. He worked long hours during the day, and even into the night, to satisfy his customers and friends. He assumed responsibilities in the Chamber of Commerce and civic clubs, and never refused to accept any responsibility assigned to him. His home life and financial success were unquestioned. After a few years of such strenuous activity he became restless, ill at ease, irritable, could not concentrate on his work, desired to stay out of his office, could not make himself arise in the morning to go to his work, and it was only after he was forced to leave the community for a three-months' period that he recuperated. He was then made to realize by his physician the cause of his mental reaction. He returned to his work with more regular hours and a definite recreation schedule, and found that he successfully carried on without further mental symptoms. In this case there was no anxiety, fear, or emotional strain. There was also the 37-year-old mechanic who during the war was called upon to serve his community day and night. He was making more money than he had ever made in his life. His bank account was going up. His wife and family were well pleased with his success. The man, being conscientious, tried to please all of his customers. After 18 months of day and night work he, also, developed mental fatigue. In military service one saw a master sergeant

OUTLINE OF SYMPTOMS

Psychoneurotic Neurasthenia	Chronic Nervous Exhaustion (Mental Fatigue States) "Acquired" Neurasthenia
1. The personality pattern has been esseutially same for months or years.	1. There is history of recent changes in personality, also history of unusual physico-mental responsibility and efforts to meet same.
2. Medical history indicates an unstable or inadequate personality.	2. Medical history often iudicates normal or stroug uervous make-up and given extra responsibilities because of same.
3. Numerous bizarre physical complaints — shifting and radiating pains about various systems or organs — and enjoys discussing these. Goes from doctor to doctor and from friend to friend seeking medical advice, sympathy, and attention.	3. Numerous bizarre physical complaints — usually voiced only when quizzed. Resents sympathy and attention. Will often try to be alone and even may decline medical attention.
4. No real insight into mental health, attributing condition to impaired physical health.	4. Knows something is wrong and often admits "jitters," "nervousness," and realizes his personality is not the same as formerly.
5. Symptoms are present at any time of day.	5. Symptoms always worse in early morning — patient feeling worse than when he retired, but feels best in early afternoon after having put out effort at his work.
6. Anxiety about himself and his physical health is prominent.	6. Anxiety not prominent, but restlessness, irritability, impulsive acts, and inability to concentrate or to carry out thoughts or action requiring sustained effort.
7. May inflict minor wounds to obtain attention or sympathy, but depression or suicide are not prominent features.	7. Depression — often with agitation, self-accusation, and suicidal acts are frequent.
8. Symptoms may come and go but it is difficult for patient to recover aud remain adequate.	8. Most patients entirely recover with decrease of strenuous responsibilities and elimination of any contributing causes as fear, auxiety, or emotional strain.







with six years of service behind him, but who, with his ability to train enlisted personnel, was assigned to training group after group of new recruits. This was between the years of 1941 and 1944. He worked on the drill field much of each day and worked late hours at night to keep up his paper work. He had no form of recreation even if he was in military service. He also developed mental fatigue and became irritable, critical, ill at ease, and so depressed that suicide was attempted. His symptoms at the time he was in the Regional Hospital were identical with those of a pilot of a B-24, who, following several combat missions, had been returned from overseas with a diagnosis of "flying fatigue."

Having emphasized that there is a clinical entity — mental fatigue; that such a condition exists in civilian as well as military life; and that the various fatigue states of war present essentially the same clinical picture without regard to the branch of service in which the individual serves, the symptoms of this sickness and its further differentiation from psychoneurosis are next in order.

First, let it be emphasized that any type of personality may develop a mental fatigue state. Next, it is easier for a psychoneurotic personality with the mental strain of anxiety, fear, and emotional instability to develop a fatigue state than it is for some of the more stable personalities to do so. It is interesting, too, to note that the so-called psychopathic personality who lives a carefree life without regard to his responsibility to his environment is less likely to develop a mental fatigue state than is any other type of personality. With the simple diagrammatic representation of a balance with the stability of nervous make-up on one side, and the responsibilities, conflicts, stresses, and strains of life on the other side, one may demonstrate (Figure 1) the so-called average normal individual; (Figure 2) the psychoneurotic personality which develops his mental condition because of his unstable make-up not being able to meet the average stresses and strains of life; and (Figure 3) mental fatigue states where the individual may have a normal or high degree of stability of his nervous make-up, but where his nervous system is subjected to unusual responsibilities, work, or stresses and strains of life, perhaps over a long period of time.

In listing the symptoms of mental fatigue states one can do so and simultaneously compare these symptoms with those of a psychoneurotic. This is done in the outline presented herewith.

While from the title of this paper the "Symptoms and Diagnosis" of Mental Fatigue States alone were to be discussed, it seems necessary to briefly mention the treatment for such conditions. Any and all treatment should be based upon the principle that to rest a human brain which has been subjected to certain thought processes over a long period of time, a complete change of the type of thought processes must be brought about. As an example, a business or professional man or a hard-working housewife may find themselves mentally exhausted at the end of many weeks' work. They go to their club for a few evenings or perhaps it is necessary to be out of town for a week in order to straighten out some business affairs of a family estate. In either case they continue to use their brain but they return to their work with a new interest and enthusiasm. To prevent the development of mental fatigue states a routine should be established which should require an individual to change his thought processes. To overcome an established mental fatigue state an individual cannot be assigned "rest" alone. He must be given some assignment which will demand a different type of thinking than that which he has been undergoing. The assignment may either be pleasant or disagreeable. The pilot who developed the flying fatigue should not be made

to remain at his station with an afternoon off without giving him some definite assignment to accomplish. Loafing around places of recreation he will continue to work his brain with thoughts of his flying and with thoughts of his not carrying on his work while his buddies are still at it. An assignment in the motor repair shop even though such an assignment might be disagreeable to him, just so that it demands a change in his thinking, will be beneficial to him. One can say then that in treating a mental fatigue state at any stage in its development that assignments must be given to the person, such assignments being either agreeable or disagreeable, or even both agreeable and disagreeable, just so that the individual is required to carry his assignments out and just so such assignments demand that his thinking processes be different from those which he used in the work or responsibility which caused him to develop his fatigue state.

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MEET OUR CONTRIBUTORS

Francis L. Lederer, M.D., F.A.C.S., Professor of Otolaryngology, University of Illinois College of Medicine and Director of Education, Illinois Eye and Ear Infirmary, is the author of "Modern Therapy of Sinus Disease" presented in this issue. Dr. Lederer received his M.D. degree from Rush Medical School in 1921 and did postgraduate work in Berlin, Paris, Prague, and Vienna. He is a member of the American Academy of Ophthalmologists and Oto Laryngologists. Dr. Lederer was a guest speaker at the Annual Meeting of the Oklahoma State Medical Association in Tulsa, May, 1947.

Harold J. Binder, M.D., of Oklahoma City, is author of "The Parent in Pediatric Practice" which appears in this issue of the Journal. He received his A.B. from Harvard and graduated from Tufts College Medical School in 1935. Dr. Binder limits his practice to Neuropsychiatry, and is a member of the American Psychiatric Association, the American Orthopsychiatric Association, and the Oklahoma City Clinical Society. He is a diplomate of the American Board of Psychiatry and Neurology (in Psychiatry).

"The Treatment of Sub-Acute Bacterial Endocarditis" was prepared by *Philip M. Schreck, M.D.*, who maintains a practice in Internal Medicine in the Medical Arts Building, Tulsa. Dr. Schreck received his medical education at Baylor University, receiving his M.D. degree in 1936. He is a member of the Internist Society.

Charles R. Rayburn, M.D., is Assistant Superintendent of the Central State Hospital, Norman, Oklahoma. He is a graduate of the University of Oklahoma School of Medicine, class of 1925, and is Chairman of the Section on Neurology, Psychiatry, and Endocrinology of the Oklahoma State Medical Association. During World War II Dr. Rayburn served as lieutenant colonel in the Army Medical Corps. He is the author of "The Mental Fatigue States, Symptoms and Diagnosis."

The Clinical Pathologic Conference report this month was prepared by *William K. Ishmael, M.D.*, and *Howard C. Hopps, M.D.*, Chairman, Department of Pathology, University of Oklahoma School of Medicine. Dr. Ishmael is a graduate of Oklahoma University School of Medicine (1935) and a Fellow of the American College of Physicians. He is a member of the staff of the Bone and Joint Hospital, Oklahoma City. He limits his practice to internal medicine, (arthritis). Dr. Ishmael is a diplomate of the American Board of Internal Medicine, and a member of the Oklahoma City Internists Association and the American Rheumatists Association. He served as Chairman of the Section on General Medicine of the Oklahoma State Medical Association in 1946 and is now Secretary of the Section.

Dr. Hopps has recently been elected Secretary of the Alumni Association of the O. U. School of Medicine and in addition to other honors previously listed, is now a member of the International Association of Medical Museums, the American Association of Pathologists and Bacteriologists, and the American Society for Experimental Pathology.

NO HEALTH DANGER IN AIR TRAVEL FOR INFANTS UNDER ONE YEAR OF AGE

There is no danger in air travel for an infant under one year of age, states a medical consultant in answer to a query in *The Journal of the American Medical Association.*

Although there have been rumors that air travel is not well tolerated by infants, the consultant points out that a United Airlines survey conducted during 1941 and 1942 revealed that a healthy baby reacts better to flight conditions than most adults.

"An infant's ears adjust to altitude more easily than an adult's," the consultant explains, "probably because their eustachian tubes are short and straight.

"Airsickness is a rarity. There have been reports of vomiting, but this apparently is due to regurgitation of food when the infant is fed aloft. The gas expansion which takes place at altitude results in a regurgitation unless great care is taken to prevent the infant from swallowing air while being fed."

CLINICAL PATHOLOGIC CONFERENCE

University of Oklahoma School of Medicine

Presented by the Departments of Pathology and Medicine

WILLIAM K. ISHMAEL, M.D., AND HOWARD C. HOPPS, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HOPPS: Since most of you have already studied the clinical data on our case for today, you know that it presents a very difficult diagnostic problem. No information has been withheld from the chart that is pertinent to the diagnosis. Dr. Ishmael never saw this patient and his factual information concerning the case is exactly the same as has been furnished to you.

PROTOCOL

Patient: O. B., white male, age 27; admitted January 24, 1946; died February 17, 1946.

Chief Complaint: Nausea, vomiting, and loss of sensation in left leg.

Present Illness: Approximately 18 months before admission, the patient was wounded in action by a .30 caliber bullet which passed through the liver. After surgical treatment bile drained from the wound for a few weeks. He then recovered. He was discharged from the Army on points, and then worked with a casing crew. In December, 1945, he received a traumatic injury to the testicles followed by pain and swelling. On Christmas, 1945, he developed a stringy mucopurulent discharge from the nose. On January 7, 1946, about two hours after his evening meal, he became nauseated and vomited. He had been constipated for two days and he took a cathartic. He developed marked tenesmus with cramping pain and diarrhea which persisted for 24 hours. Following this he was again constipated. Intermittent attacks of pain continued, following meals, and he lost 20 pounds in weight during the next 17 days. He developed a nocturia of 3-4 times.

Past History: While in the Army, in the E.T.O., the patient was hospitalized nine days for abdominal pain. He was told that he had "nervous stomach trouble" and was discharged. He had also had gonorrhea in the Army, but recovered without untoward incident.

Physical Examination: There was bilateral inguinal lymph adenopathy. The respiratory rate was rather rapid. Vocal fremitus was increased, and soft rales were heard in both upper lobes. The pulse rate was 110 per minute and the blood pressure was 126/78. The heart was normal. The temperature was 100.8° F. The abdomen was diffusely tender and there was marked involuntary rigidity. No abnormal masses were palpated. The left testicle was tender. Tactile sensation was diminished over the left leg and there was hypoesthesia. There was hyperesthesia over the entire abdomen.

Laboratory Data: Upon three urinalyses, specific gravity varied from 1.004 to 1.016. There was a trace to 1+ albumin in the urine on each examination and 8-10 white blood cells per low-power field on one occasion. On January 24, 1946, hemoglobin was 11 Gm. per cent, red blood cell count 3.49 million, and the white blood cell count 17,600 with 87 per cent neutrophiles and 13 per cent lymphocytes. On February 6, 1946, the white blood cell count was 23,600 with 81 per cent neutrophiles (36 per cent stabs), 8 per cent eosinophiles, 1 per cent basophiles, 7 per cent lymphocytes, and 3 per cent monocytes. On February 15, 1946, white cells numbered 22,850 with 75 per cent neutrophiles, 5 per cent eosinophiles, 2 per cent monocytes, and 18 per cent lymphocytes. On the two last counts many toxic granules were seen in the neutrophiles. On January 28, 1946, the blood sugar was 91 mg./100 cc. On February 7, 1946, the blood calcium was 7 mgm. per cent and on February 14, 1946, it was 6 mgm. per cent.

The blood Mazzini test was 1+ and the Kolmer negative. On January 26, 1946, the spinal fluid Wassermann was 1 plus, globulin was negative, protein 10, and pH 7.3; there was 1 neutrophile and 2 lymphocytes per cu. mm. The colloidal gold curve was 1221000-000. Agglutination tests were inconclusive. On February 3, 1946, the sedimentation rate was 13-55-81-94 mm. Cephalin flocculation was negative, blood cultures negative, stool culture and Ewald Meal were as usual. X-ray reports showed no definite lesions of chest, abdomen, or spine. On February 14, 1946, biopsy of a lymph node was reported as lymphnodulitis, chronic.

Clinical Course: The patient maintained a low grade septic temperature up to 100-101° F. On January 27, 1946, the patient wrenched his left knee and this was followed by persistent numbness of the left leg. On the following day paraesthesia was noted in the right hand. This progressed in extent and manual clumsiness developed. On February 4, 1946, there was anesthesia of both hands and feet, with loss of tactile and temperature sensations. Pain in the abdomen and upper right chest increased and the general condition became worse. The patient was not mentally clear at all times. Treatment was symptomatic and supportive. On February 16, 1946, the patient ate a large breakfast, following which he became nauseated. At 10:00 a. m. he developed pain in the right costal margin. A placebo had no effect, and M.S. grs. 1 6 was given. He became delirious, then comatose, and died at 4:40 a. m.

CLINICAL DIAGNOSIS

DR. ISHMAEL: Since you have all read this protocol, there seems little point in rereading it. The most interesting part of medicine lies in making the diagnosis and such a case as this presents a real challenge to our ability. We must depend not only upon an ability to correctly interpret the pertinent data, but upon our skill in making a pertinent history and physical examination — knowing what laboratory work to order, and properly evaluating the results.

This young man had apparently been in good health until the present illness. The story begins with a rather serious battle injury from which he appeared to recover without residual effect. The significance of this injury is very difficult to evaluate, but we must certainly consider the possibility that subsequent developments were related to it. Over a year elapsed before we encounter another episode of serious illness. The relation of cramping abdominal pain to meals, with diarrhea followed by constipation, definitely points toward the gastro-intestinal tract. The loss of 20 pounds in 17 days is additional evidence of the severity of this attack. The next pertinent thing in the history is the development of numbness in the left leg. We would like to know more about this — the type of onset, its extent, etc. At any rate, this would seem to indicate involvement of the nervous system. Throughout the hospital course it is stated that the patient had fever — a low-grade septic temperature. This points to an inflammatory basis for the disease. Nocturia, with slight proteinuria, indicates renal involvement. Then we have paresthesia, anesthesia with loss of tactile and temperature sensations involving the hands and feet. The last major complaint was of chest pain. I have presented these various and sundry symptoms in this manner to stress the multiplicity of systems involved in the disease — the gastro-intestinal system, the urogenital system, the nervous system, and the lack of apparent relation which these symptoms bear to each other. There is little additional information to be gained from the physical examination. The inguinal lymphadenopathy does not appear to be very significant. Probably it is a part of the general inflammatory reaction or an effect of a toxic state.

Significant laboratory findings, other than those already mentioned, include a leukocytosis of 22,000. Eosinophilia was present, (8 per cent and 5 per cent) on two occasions. With the high white blood count goes a high sedimentation rate. This is strong additional evidence for inflammatory disease — in contrast to a degenerative condition. The presence of many toxic granules in leukocytes, and the anemia, speaks for an accompanying toxemia. There was a negative blood culture. The fact that this was taken means that someone considered septicemia a possibility. There was hypocalcemia which was approaching a critical limit. Otherwise, most of the findings were negative or inconclusive.

The most striking and significant thing about this case is the multiplicity of more or less focal lesions, severe where they did occur, involving a variety of different organs.

With the fever, involvement of the gastro-intestinal tract, genito-urinary tract, and nervous system, plus the high leukocyte count and eosinophilia, the most likely diagnosis

to me is *periarteritis nodosa*. I do not mean to be positive about this — one cannot be dogmatic about periarteritis nodosa. This is not a common disease and one is hesitant to make such a diagnosis in his own practice.

Certainly other diseases must be considered. *Carcinomatosis* is well known to cause multiple focal lesions in many sites. With carcinomatosis, pain is usually a more prominent feature than in this case. We would expect also more evidence of cachexia, general debility, etc. This man is far from the age of greatest cancer incidence, but a number of malignant neoplasms are quite possible at this age. *Leukemia* is one of these. To me, in spite of the elevated white count, there is nothing upon which to base a diagnosis of frank leukemia. Sub-leukemic leukemia seems unlikely too — for one thing there was no splenomegaly, nor was there generalized lymphadenopathy. If this were a carcinoma I would consider the kidney as a possible primary site. Hematuria did not occur, nor was there evidence of renal insufficiency. *Carcinoma of the testicle* is a possibility and its occurrence might have been precipitated by trauma received 14 months before his death. *Carcinoma of the lung* occasionally gives extensive metastasis before causing significant local signs or symptoms. This disease could be primarily infectious — *pyemia* perhaps. It might be better to speak about an abscess with metastasis. By this I mean to imply a progressive suppurative focus with but occasional release of infective emboli into the blood stream, rather than a persistent blood stream infection. Pyophlebitis could produce such an effect. So also could an abscess of the appendix. We could compare this case with one recently seen at Will Rogers, in which the primary lesion was a periappendiceal abscess. Finally, we could consider a specific infection such as tuberculosis — *miliary tuberculosis*. The absence of x-ray findings in the chest would be strong evidence against this. A leukocytosis of 22,000 is not characteristic.

CLINICAL DISCUSSION

QUESTION: What does this collodial gold curve of the spinal fluid indicate?

DR. ISHMAEL: Dr. Hopps is better qualified than I to answer this question. I place no significance on it myself.

DR. HOPPS: It is within normal limits.

QUESTION: What would be the basis for pain in the abdomen and chest in periarteritis nodosa?

DR. ISHMAEL: Anywhere there is a blood vessel there may be a pain. This would probably relate to local reaction of and around the blood vessel with marked exudation, ischemia, etc. Vascular lesions are often very painful.

QUESTION: What about the spinal fluid Wassermann?

DR. ISHMAEL: The Wassermann was 1+ and the globulin was negative. With a 1+ Wassermann in a patient with a leukocytosis of 22,000, fever, etc., I would not want to say that he had syphilis.

DR. HOPPS: It must be remembered that the Wassermann test is a highly artificial procedure in which the result is not based upon the reaction of antibody with specific *spirochetal* antigen. There are literally dozens of conditions that will cause false positive Wassermann reactions. In an illness of this type with evidence of a generalized inflammatory and toxic reaction 1+ Mazzinis and 1+ Wassermanns are not of diagnostic significance.

QUESTION: Following this man's battle wound, was the bullet removed?

DR. ISHMAEL: I believe that a high speed bullet would pass right on through. It could have been stopped by the spine, but I think it must have been sent on through the body. We assume that he recovered from this since he remained in the Army for a time and was finally discharged because of accumulated points. X-ray studies in this hospital did not reveal evidence of a foreign body.

QUESTION: Is it common to get leukocytosis with periarteritis nodosa?

DR. ISHMAEL: I have had only two cases of this and I missed the diagnosis on both, so I cannot say.

DR. HOPPS: If I understand correctly, Dr. Ishmael, your diagnosis in this case is periarteritis nodosa?

DR. ISHMAEL: Yes.

ANATOMIC DIAGNOSIS

DR. HOPPS: I want to congratulate you upon a brilliant diagnosis. The man did die of periarteritis nodosa — the diagnosis was not made clinically, nor was it made at the time of necropsy. It required microscopic examination of the tissues to establish the point. The gross findings at necropsy were rather disappointing as a matter of fact. It was evident that this man had been wounded in the way that has been described and there were adhesions in that area. The most striking thing at necropsy, however, was a retroperitoneal hemorrhage which involved the upper pole of the right kidney and the right supra-

renal gland. I hasten to say that the extent of this hemorrhage was not great. The man did not bleed to death; he had not lost over 200 cc. of blood.

The second finding of significance concerned the heart. It weighed 450 grams which is about one-third greater than normal. There was no valvular lesion to explain this hypertrophy. There were also irregular patches of whitened and thickened epicardium at the base of the heart and several rather firm white nodules up to 2 mm. in size were found distributed along the course of major coronary arteries. The significance of these changes was not realized at the time.

The lungs were slightly increased in weight but were not extraordinary. Of the abdominal viscera, the liver was moderately enlarged (1700 grams). Each kidney weighed almost twice the normal amount. Hemorrhage was as previously described. This represents the extent of the pertinent gross anatomic findings.

The histopathology was of most significance. The characteristic polyarteritic lesions were found in many organs and in such a distribution as to explain the clinical picture. The lesions vary considerably depending upon their age. The essential features include fibrinoid necrosis of the media, edema and extensive infiltration of inflammatory cells — polys, lymphocytes, and macrophages. The lumen may be almost completely obliterated as a result of swelling or it may be occluded by a thrombus. There was a unique feature of this case and it explains the peculiar central nervous system manifestations. To our knowledge, this is the first case of periarteritis nodosa with extensive arteritic lesions and secondary degenerative changes in the spinal cord.

We have learned a great deal about this disease in the last few years. More and more evidence has accumulated to support the hypothesis that it is an allergic inflammatory disease. This seems now to be proved since Dr. Rich and his co-workers have produced the disease experimentally following injection of horse serum. We have confirmed and extended these observations in my laboratory. At the moment, Dr. McCollum and I are continuing this work with special reference to cardiac lesions and E.C.G. changes. Periarteritis nodosa has increased considerably in the last five or six years. Dr. Rich attributes this to hypersensitivity and reaction to sulfonamides. He has presented several clinical studies as well as experimental observations to support this thesis.

DISCUSSION

DR. YOUNG: I would like to know if the biopsy revealed any specific changes?

DR. HOPPS: It was not so reported — I did not see the biopsy specimen.

DR. COOPER: Was there any history of subcutaneous or skin nodules in this patient?

DR. HOPPS: No.

DR. COOPER: I have never actually seen a case of periarteritis nodosa with skin nodules, but I know that they do occur with a relatively high degree of frequency.

QUESTION: Is leukocytosis often found in periarteritis nodosa?

DR. HOPPS: One of the major characteristics of periarteritis nodosa is the extreme variability of signs and symptoms. Leukocytosis can occur as a part of the disease, but I do not believe that it is of diagnostic significance.

A.M.A. COUNCIL REPORTS 70 PER CENT OF 6,252 MEDICAL SCHOOL FRESHMEN ARE WAR VETS

The American Medical Association recently announced that 70 per cent of the 6,252 students who have been selected as freshmen to enter medical schools and schools of basic sciences in the United States in 1947 are war veterans.

The freshmen students elected up to June, 1947, include 4,399 male veterans (70 per cent), 1,301 other men (21 per cent), and 598 women (9 per cent). Forty-seven of the women are veterans.

These figures are contained in the 47th annual report on medical education in the United States and Canada by the Council on Medical Education and Hospitals of the American Medical Association. The report is published in the August 16 issue of *The Journal of the American Medical Association.*

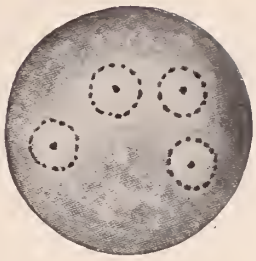
Donald G. Anderson, M.D., secretary of the council, who prepared the report with the assistance of F. H. Arestad, M.D., and Anne Tipner, states that in 10 schools present figures indicate that the freshman classes in 1947-48 will be at least 10 per cent larger than those enrolled in 1941-42.

The report points out that "during the five year period July 1, 1942, to June 30, 1947, a total of 406 graduations have been held. This figure does not include the graduations at Tennessee, which were on a quarterly schedule.

"On the prewar schedule of one graduation for each school per calendar year the normal number of graduations for this period for the schools in the United States, excluding Tennessee, would have been 336. The accelerated program thus made possible the training and graduation of 70 additional classes in a five year period."

The council's report on the total enrolment for 1946-47, excluding students taking a required intern year, in the 70 medical and seven basic science schools in the United States was 23,900, of which 13,308, or 55.6 per cent were veterans. This enrolment, states the report, is 684 greater than the enrolment for 1945-46 and is only 766 less than the enrolment of 24,666 for the 144 "second session," the largest enrolment since 1910.

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1. D'Antani, J. S.: Amebiasis, Recent Concepts of Its Prevalence, Symptomatology, Diagnosis and Treatment, Internat. Clinics 1:100 (March) 1942.

2. Mansan-Bahr, P.: Some Tropical Diseases in General Practice, Glasgow, M. J. 27:123 (May) 1946.

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Special Article

A COUNCILOR RESIGNS

Dr. Oscar E. Templin, who is giving up his pactice in Alva, will move to Tahlequah where he will be in charge of a public health unit covering five counties. Those who do not know Dr. Templin have only to look at the genial face on the cover of this issue of the Journal to realize that the people of Alva and the northwest section of the state are losing not only a good family doctor but a man who has sucked enough wisdom and equanimity through that briar root to make of him a true friend and a wise councilor. Thirty-eight years as a general practitioner in the short grass country is enough to make a man of anybody who has the hardihood to stay in the harness. The experience not only builds physical endurance but it begets patience, understanding, and cooperation far beyond the ken of the city physician.

Dr. Templin is truly a self-made man. He graduated from the Medical Department of Vanderbilt University in 1905. After a short period of practice in Nashville, Tennessee, he came to Oklahoma and located at Darrow, in Blaine County. In 1909 he moved to Alva where his practice was uninterrupted except during World War I. He was in France from June, 1918, to July, 1919, having served most of the time in the Red Cross Hospital Number I in Paris.

Time and space will not permit the enumeration of Dr. Templin's fine qualities and good deeds but they will be on the lips of thousands whom he has served and who will miss him when he is gone. Dr. Templin's influence and abilities were not confined to his immedate community. He not only served his own people and his local medical organizations but he was active in the pursuit of organized medicine, state and national, and served on the Council of the Oklahoma State Medical Association for a period of 16 years. Because of the contemplated change in residence, he has presented his resignation from the Council. His long term of service and his faithful attention to duties throughout the years deserve the highest commendation. This is not an obituary but an attempt to extend sympathy to his friends and patients and to wish for Dr. Templin great success in a new field of endeavor.

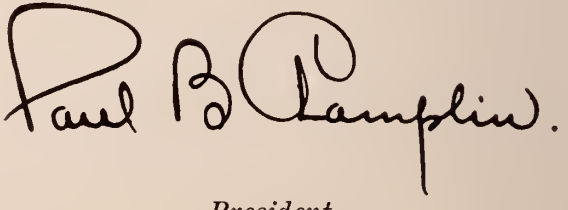
President's Page

It is very possible that by the time this message is published all members of the Association will have received the Announcement of the Agreement with the Veterans Administration whereby the medical profession in Oklahoma will render home town medical care to veterans.

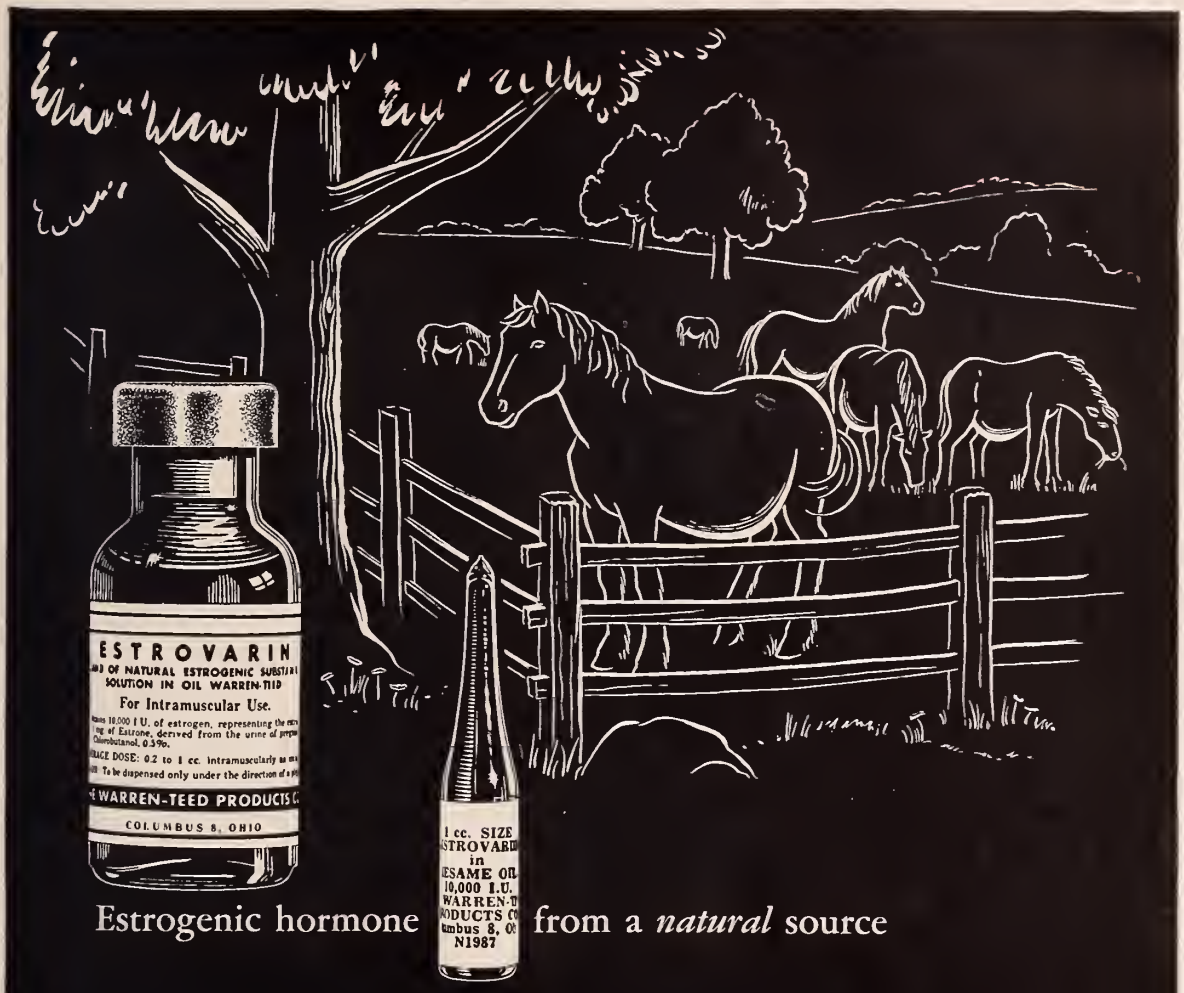
There is little likelihood that the Association, through its members, has ever undertaken a more ambitious program. The success of the program will depend upon the cooperation given by each member and we must not fail.

There is no doubt that some phases of the program will not be to the liking of some of us individually, that we will be asked to do paper work considered unnecessary, etc. May I counsel each of you that this is an opportunity for the medical profession to show the people of this state that we can do a job in health care on a voluntary basis and without the establishment of another governmental bureau.

Whether or not you participate in the program is a decision for you to make. However, I sincerely hope that every member of the Oklahoma State Medical Association will accept his appointment in the program and then render the finest medical care possible to the veterans.



President.



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ASSOCIATION ACTIVITIES

SPECIAL CANCER SHORT COURSE SCHEDULED FOR OCTOBER

Physicians of national repute will lecture to Oklahoma physicians on several phases of malignancies of interest to both the medical and dental professions in ten different Oklahoma cities during the week of October 6 through 10, 1947.

A symposium program on malignancies of the mouth and associated structures, malignancies of the head, neck, breast, and chest, as well as radiology diagnosis in relation to these subjects, is planned for the lecture series. There will be no registration fee.

Two teams of lecturers have been selected in order that the eastern and western halves of the state can be covered simultaneously. Lectures will be presented in the afternoons from 1:30 p.m. until 5:00 p.m. and in the evenings from 7:00 p.m. to 9:00 p.m. as follows:

Oct. 6	Monday	Oklahoma City and Tulsa
Oct. 7	Tuesday	Enid and Muskogee
Oct. 8	Wednesday	Woodward and McAlester
Oct. 9	Thursday	Clinton and Durant
Oct. 10	Friday	Duncan and Ada

Places of meeting will be announced in the near future.

This Postgraduate Symposium is being presented through the cooperation and financial support of the Oklahoma Chapter of the American Cancer Society, the State Department of Health, the Oklahoma State Dental Society, and the Oklahoma State Medical Association.

It is recognized that a more ideal arrangement would include many additional communities in the itinerary but prominent speakers are most difficult to obtain for any length of time and therefore only those cities geographically centered according to the doctor population can be selected for the lectures. Many physicians will find it necessary to drive 40 or 50 miles, but considering the prominence of the speakers and the authorative information they will impart the inconvenience will be greatly justified.

The following constitutes the list of guest lecturers who are scheduled to participate in the symposium:

Malignancies of Head and Neck. William S. MacComb, M.D., Member of Head and Neck service, Memorial Hospital, New York, New York.

Malignancies of Chest. Thomas H. Burford, M.D., Associate Professor of Surgery, Washington University School of Medicine, St. Louis, Missouri.

Alton Ochsner, M.D., Professor of Surgery, Tulane University School of Medicine, New Orleans, Louisiana.

Malignancies of Breast. Thomas G. Orr, M.D., Professor of Surgery, University of Kansas School of Medicine and Surgeon in Chief of the University of Kansas Medical Center, Kansas City, Kansas.

Radiology As Related to These Subjects. Fred J. Hodges, M.D., Professor, Department of Roentgenology, University of Michigan School of Medicine, Ann Abor, Michigan.

A. H. Dowdy, M.D., Chairman, Department of Radiology and Director, Atomic Energy Project, University of Rochester School of Medicine and Dentistry, Rochester, New York.

Malignancies of the Mouth. James B. Smith, D.D.S., Head of the Department of Oral and Maxillofacial Surgery, George F. Geisinger Memorial Hospital, Danville, Pennsylvania.

Fran A. Henny, D.D.S., Associate Surgeon, Division of Oral Surgery, Henry Ford Hospital, Detroit, Michigan.

NEW TULSA CLINIC OPENS

The Glass-Nelson Clinic, newest of Tulsa's medical institutions, was formally completed last month with the installation of modern air conditioning equipment. Opened early in July after more than 18 months of construction, the attractive one-story structure at 2020 South Xanthus houses seven prominent Tulsa medical doctors.

The new clinic is of a modern architectural design, attractively decorated and furnished. Its facilities include complete and modern x-ray equipment, pathological laboratories, comfortable waiting rooms, pharmacy, modern optical and refraction equipment, spacious parking facilities, completely equipped diagnostic and examination rooms, business office, record room, and physicians' offices. An effective use of paneled wood accentuates the beauty of the new building.

The personnel of the Glass-Nelson Clinic includes Dr. Fred A. Glass, surgeon; Dr. Frank J. Nelson, internist; Dr. Thomas H. Davis, surgeon; Dr. D. L. Edwards, ophthalmologist-otolaryngologist; Dr. Hays R. Yandell, surgeon; Dr. Royston Miller, orthopedic surgeon; and Dr. Paul T. Strong, internist.

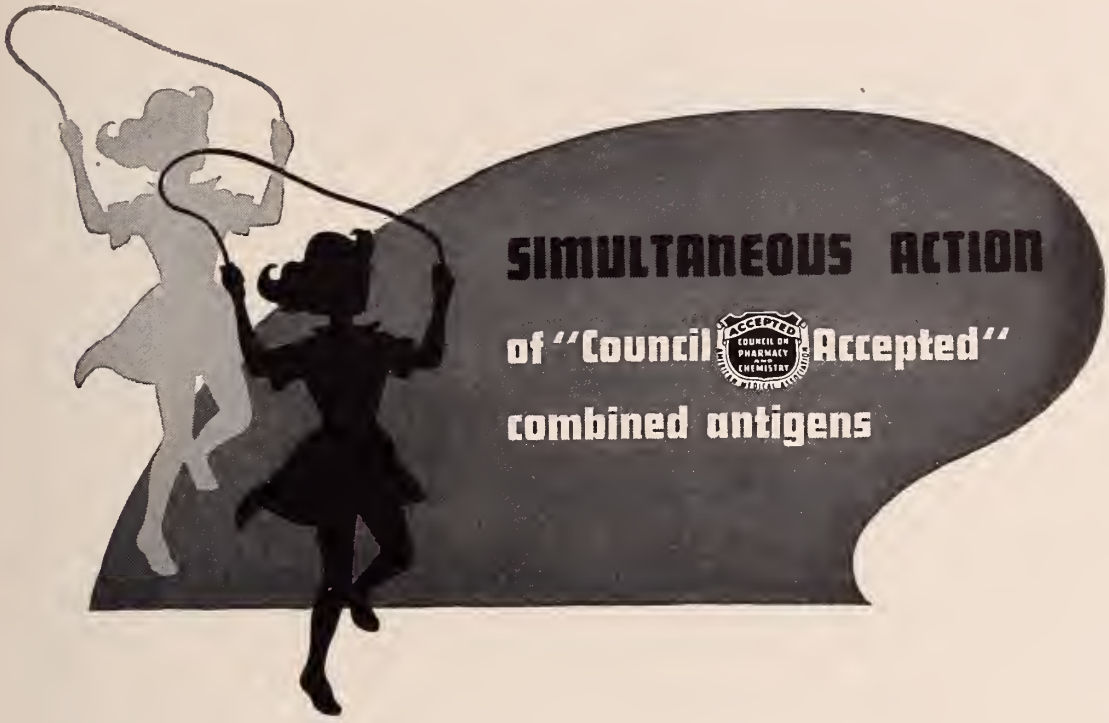
Members of the Oklahoma State Medical Association are invited to visit the clinic at their convenience.

KANSAS CITY CLINICAL SOCIETY MARKS SILVER ANNIVERSARY

The Annual Fall Clinical Conference of the Kansas City Southwest Clinical Society will be held in the Municipal Auditorium, Kansas City, Missouri, October 6, 7, 8, 9, 1947. The list of outstanding guest speakers who will participate in the four-day conference can be found on page v of this journal. These teachers will take part in the general assemblies, round table luncheon, question and answer periods, and some of the sectional lecture series.

Five series of sectional group lectures will be presented concurrently the mornings of October 7, 8, and 9. These talks will be concise, on problems of interest to physicians in their daily practice, many with patient demonstrations. Two round table luncheons will be held daily, one for the medical and the other for the surgical groups. This feature is a part of the scientific program with ample time following the luncheons for the registrants to direct questions to any of the guest speakers, all of whom will attend the luncheon each day.

A joint meeting with the county medical societies will be held Monday evening. This will be a clinicopathologic conference, directed by Ferdinand C. Helwig with Drs. Wm. E. Adams, Robert Elman, George Ewell, Howard K. Gray, Russell L. Haden, John S. Lockwood, Robert A. Moore, Eugene Pendergrass Leon Schiff, and Willard Thompson participating. Additional features include Tuesday evening's Stag Party, scientific exhibits and movies, technical exhibits, and radio broadcasts by guest speakers. The registration fee of $15.00 includes all of the above features without additional charge. Special arrangements have been made by the women's committee to entertain the wives of registrants. Alumni dinners will be held on Weduesday evening, the eighth.



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INSTRUCTIONAL COURSE IN ALLERGY

The American College of Allergists has announced that its annual Fall Graduate Instructional Course in Allergy will be given in Cincinnati, Ohio, November 3-8 inclusive, under the auspices of the Medical College of the University of Cincinnati.

The program this year is expected to be the best ever offered by the College. Forty six formal lectures are listed and also a special allergy clinic of case presentations. An added feature this year will be three informal discussion groups led by various members of the faculty, which is composed of more than 40 outstanding physicians and scientists from the United States and Canada. The course presents a comprehensive study of the entire field of allergy, covering the fundamentals, special allergies, specific diseases, and all modern methods of treatment. Symposiums on dermatologic and pediatric allergy are also included, as well as a survey of the laboratory approach to the subject including preparation and standardization of extracts and skin testing.

The course is recommended to all those especially interested in allergy, and to the general practitioner and specialist who anticipates treating his own allergic patients. Programs and complete information can be obtained by writing to the College Secretary, Dr. Fred W. Wittich, 423 La Salle Medical Building, Minneapolis 2, Minnesota.

RESEARCH FELLOWSHIPS OFFERED BY A.C.P.

The American College of Physicians announces that a limited number of Fellowships in Medicine will be available from July 1, 1948-June 30, 1949. These fellowships are designed to provide an opportunity for research training either in the basic medical sciences or in the application of these sciences to clinical investigation. They are for the benefit of physicians who are in the early stages of their preparation for a teaching and investigative career in Internal Medicine. Assurance must be provided that the applicant will be acceptable in the laboratory or clinic of his choice and that he will be provided with the facilities necessary for the proper pursuit of his work.

The stipend will be from $2,200 to $3,000.

Application forms will be supplied on request to The American College of Physicians, 4200 Pine Street, Philadelphia 4, Pa., and must be submitted in duplicate not later than November 1, 1947. Announcement of the awards will be made as promptly as is possible.

A.C.P. PLANS 1948 MEETING IN SAN FRANCISCO

The American College of Physicians will conduct its 29th Annual Session at San Francisco, April 19-23, 1948. General Headquarters will be at the Civic Auditorium. Dr. William J. Kerr and Dr. Ernest H. Falconer, both of San Francisco, are the Co-Chairmen for local arrangements and the program of Clinics and Panel Discussions. The President of the College, Dr. Hugh J. Morgan, Professor of Medicine at Vanderbilt University School of Medicine, Nashville, Tennessee, is in charge of the program of Morning Lectures and afternoon General Sessions.

Secretaries of medical societies are especially asked to note these dates and, in arranging meeting dates of their societies, to avoid conflicts with the College Meeting, for obvious mutual benefits.

WHAT DOES THE PUBLIC THINK?

With this article is instigated a two-part series of an interesting and important report entitled "Opinions of the Public and of Physicians" as compiled by The Opinion Research Corporation of Princeton, N. J., for the Medical Services Foundation, Chicago. It is a nation-wide representative survey of opinion incorporating information obtained from the year 1943 to as late as May, 1947. Findings are based upon interviews with individuals in all income groups, trades, and professions in all sections of the country. It is estimated that the chances are 996 to 1,000 that the findings are within two per cent of the result that might be obtained by interviewing 100 million people.

The percentage of people having heard of the A. M. A. is exceptional and in some respects astounding. The public votes 12 to 1 in approval of the A. M. A. However, the real measure of its approval is registered in the opinions expressed on issues directly related to the profession.

On the basis of the complete result of the many findings, an accurate appraisal can be made of the public's opinion of our system of medical care — and the extent to which the profession has been true to its trust. In turn, the profession can gauge the soundness of the A. M. A. and of the groups that have worked with it toward accomplishing common objectives.

A predominant majority of American citizens look upon "their physician" not only as their medical doctor but as a confidant, a counselor, and friend. When asked the question, "Do you think of your doctor as an impersonal professional man or would you say he has a personal interest in you and your welfare?" responses were:

	1943	1947
Has a personal interest	81%	83%
Impersonal professional	15	14
No opinion	4	3

Of each group of 83 people who believe that "their physician" has a personal interest in their welfare, 65% believe he is a more effective physician for them by virtue of this personal interest. They were asked, "Do you think this makes him a better doctor, or would he be just as good a doctor for you without that interest?" The answers were:

	1943	1947
Makes him a better doctor	63%	65%
Just as good without interest	16	15
No opinion	2	3

In such manner does the public appraise the medical value of the much-discussed physician-patient relationship.

It should be remembered that over the period of the last five years the needs of war made abnormal demands on the services that were available. More than 50 thousand physicians were moved from civilian practice to serve the armed forces. In addition, potent propaganda by government agencies was unleashed, directed at creating an ever-increasing demand for medical and hospital care. The result of the combined causes and effects is a vast growth in the consciousness of needs. When asked the question, "Do you think your town or county has enough doctors, nurses, and hospitals to care for all the people who need medical care?" the answers were:

In	Enough	Not Enough	Don't Know
1943	74%	19%	7%
1945	73	23	4
1947	21	70	9

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fession, the Hill-Burton Bill has been enacted into Public Law 725. Through it a stimulus is provided and appropriations legalized which should result in increased facilities. The support given this legislation furnishes evidence of the awareness on the part of the medical profession of a growing need.

This is a period of post-war readjustment. Many people say that they have had an experience where paying doctor and hospital bills was a hardship. In 1947, there were 2% more that had such an experience than was the condition in 1943. The question was asked, "Have you or your family ever had an experience where paying doctor or hospital bills was a hardship?" The responses were:

	Have Had Experience	Have Not
Total 1943	45%	55%
Total 1945	43	57
Total 1947	47	53

There is a growing belief that something can and should be done to make it easier for people to pay doctor and hospital bills. When asked the question, "Do you think anything might be done to make it easier for people to pay doctor or hospital bills?" the answers were:

	Something Might Be Done	Nothing to Be Done	Do Not Know
In 1943	63%	11%	26%
In 1945	71	12	17
In 1947	70	9	21

On the whole, the opinion is held that meeting the cost of ordinary illness does not present a serious problem. But out of each group of 70 people who believe some relief possible, 36 feel that a method of easier payment should be provided for really serious illness. The question was asked, "Do you think that an easier method of payment is needed to meet ordinary doctor bills, or just to take care of serious emergency illness?" The answers recorded were:

	Ordinary Bills	Serious Illnesses	Both	No Opinion
In 1943	5%	33%	21%	4%
In 1945	7	40	20	4
In 1947	6	36	23	5

It is of paramount significance that when queried as to what they thought might be done to provide easier payment of serious illness and hospital costs, only eight people out of a hundred (8% of all the people) volunteered compulsory government insurance as a possible remedy.

The medical profession holds similar opinions. Their belief and the sincerity of their intent is evidenced by the development of physician-sponsored prepayment medical care plans, their encouragement of industries in the purchase of group insurance for employees, and the promotion of other insurance coverage.

One evidence of the effectiveness of these desires and efforts is in the increasing number of business concerns who share with their employees the cost of insurance or who provide protection for employees and for their dependents. The question was asked, "Does the firm you work for (your husband works for) provide any plan for paying the cost of serious illness?" The answers:

	Provides Plan	Does Not	Don't Know
In 1943	22%	69%	9%
In 1947	26	70	4

A large percentage of the uninformed were, during this period, moved into an area of awareness. Out of each group of 26 people who work for firms providing insurance, 20 participated as compared to only 16 out of 22 in 1943. Of the balance working for firms who do not provide insurance, 41% say they would be interested in participating in such protection.

(Continued in Next Issue)

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* Vital Statistics—Special Reports: Vol. 25, No. 12, National Office of Vital Statistics, Washington, D. C. (Oct. 15) 1946, p. 206.

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BOOK REVIEWS

AMERICAN SANATORIUM ASSOCIATION, A BRIEF HISTORICAL SKETCH. Lewis J. Moorman, M.D. Historical Series No. 3. New York: National Tuberculosis Association, 1947.

Dr. Moorman's sketch of the American Sanatorium Association takes us from its beginning in 1905 to 1939, when it was reorganized as the American Trudeau Society. His long association with this group, plus his gift for depicting the human side of history, makes this little volume a distinct contribution to the story of tuberculosis in this country.

The book opens with an excellent description of Edward Livingston Trudeau's coming to the Adirondacks, an event which led to the establishment of the Adirondack Cottage Sanatorium at Saranac Lake in 1885. From this two-bed cottage sprang the sanatorium movement in this country.

In 1898, Lawrason Brown came to Saranac Lake for his health, and remained to work for Trudeau. It was Brown who originated and developed plans for organizing physicians engaged in sanatorium work and who held membership in the National Association for the Study and Prevention of Tuberculosis (later to become the National Tuberculosis Association). Writes Dr. Moorman, "Under the influence of the tuberculous physician, philosopher, fisherman, and hunter, and through the innate power of his own genius, Brown was developing scientific maturity and a high conception of the art of medicine, with a desire to assemble and disseminate all available knowledge for the benefit of those who suffered from tuberculosis. Trudeau's life work had attracted attention throughout the world. Dr. Vincent Y. Bowditch was the first to follow the example of Trudeau, by opening his institution at Sharon, Massachusetts. Soon sanatoria were being developed in nearly every state in the Union."

The Association's first meeting was held December 1, 1905, in New York City, with 17 members present. The officers elected were: Vincent Y. Bowditch, president; Lawrence F. Flick, vice president; and Lawrason Brown, secretary-treasurer. Moorman traces the history of the organization by presenting material and incidents from their semi-annual meetings. These meetings well reflect the problems that interested sanatorium physicians. Not much time was devoted to sanatorium administrative problems or the public health aspects of tuberculosis, but all methods of therapy were ardently pursued. Little of the controversy arose, which was evident in the early years of the National Tuberculosis Association, between the medical men concerned with treatment and those interested in prevention.

No important scientific advances were made in the field of tuberculosis during the period covered, but much was done with the knowledge available. The tremendous growth of the sanatorium movement in this country certainly has played a major role in reducing tuberculosis to its present level.

We list some of the topics discussed through the years: "Relative Value of Shacks and More Permanent Structures in the Treatment of Pulmonary Tuberculosis," (1908). "The Proper Dose of Fresh Air," (1909). The first paper presented on artificial pneumothorax was given in 1912 by Herbert M. King.

In 1915, Edward R. Baldwin made a plea in an effort to stimulate research in tuberculosis, which was lagging. The year 1917 brought "The War Food Problem." A Symposium on Tuberculous Children and Their Care was presented at the seventeenth annual meeting in 1921. In this same year, "The American Review of Tuberculosis" made its appearance. This publication became the mouthpiece of the association. Thoracoplasty in pulmonary tuberculosis was discussed for the first time by Edward S. Welles in 1925. The following year, among the papers read was "Dependable Symptoms for Making a Diagnosis of Early Clinical Tuberculosis," by R. M. Pottenger.

By 1930, some of the special committees were presenting valuable reports and studies on Heliotherapy, Standardization of Tuberculin, Roentgen Ray Technique, Standardization of Sanatoria, Etc. Such contributions as these were helping to bring the management of the tuberculous in this country to a high level.

The need for reorganization of the association had been felt for many years, so that its scope could be widened. This came about in 1939, when it became the medical section of the National Tuberculosis Association. The author, who became the second president of the new organization, closes with these words, "Thus the American Sanatorium Association bequeathed to the American Trudeau Society its accumulated treasure of knowledge and traditions and gave to the new organization the name of its patron saint. Although the name 'Trudeau' broadens the scope, it forever fixes the sanatorium concept in the minds and hearts of all who know the history of tuberculosis. The wisdom of those who recognized the mandates of progress and advocated reorganization has been attested by the phenomenal growth of the American Trudeau Society, attaining a membership of twenty-nine hundred by the end of 1946, with twenty-three standing committees and fourteen sections actively pursuing the work so well begun by that little organization group in the Museum of Natural History of December 1, 1905."—Richard M. Burke, M.D.

"COURAGE AND DEVOTION BEYOND THE CALL OF DUTY"

The final edition of the book, "Courage and Devotion Beyond the Call of Duty," which is composed of official awards and citations received by U. S. medical officers during World War II, is now being prepared by Mead Johnson and Company, Evansville, Indiana.

Any physician, who has not already done so, should write to Mead Johnson and Company advising them of the awards he has received and also send a typewriten or photostatic copy of his citations. The following material information would be of assistance in compiling the material for this book: Present rank or rank at time of discharge. Branch of service. From what university and in what year M.D. degree was received. Date of entry into service.

DEADLINE FOR GI INSURANCE RENEWAL EXTENDED

It has been announced by the Veterans Administration that World War II veterans who have let their National Service Life Insurance policies lapse for a period of more than three months have until January 1, 1948, to reinstate them without generally having to take a physical examination.

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Carl E. Bodgley, M.D., ORTHOPEDIC SURGERY, University of Michigan School of Medicine, Ann Arbor, Michigan.

Edward L. Bortz, M.D., President of the American Medical Association, Philadelphia, Pennsylvania.

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Wiley Dovis Forbus, M.D., PATHOLOGY, Duke University School of Medicine, Durham, North Carolina.

Thomas E. Jones, M.D., SURGERY, Surgical Division, Cleveland Clinic, Cleveland, Ohio.

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MEDICAL ABSTRACTS

EXAMINATION OF BREASTS AND PELVIC ORGANS IN APPARENTLY HEALTHY WOMEN. Agusta Webster, M. Allice Phillips, Luella Nadelhoffer, Marguerite Oliver, and Eloise Parsons. Illinois M. J., May, 1946.

The authors present statistics on the first 1,600 examinations in a clinic designed to educate the public on the value of periodic physical examination for possible detection of early cancer or precancerous lesions. Routine examination included a thorough physical examination, complete blood count, urinalysis, blood serology, urethral and cervical smears, Papanicolaou's vaginal smear, and fluoroscopic chest examination. Breasts were examined by palpation and transillumination, regardless of any localized complaints. No treatment is given at the clinic; all pathologic indications and recommendations for biopsy are reported to the private physician.

Breast examinations uncovered 10 proved cases of mammary carcinoma in the first 600 women seen, but in the next 1,000 there were no obvious malignancies, and biopsy was requested in only 11. Evidently some of the first group of patients, contrary to plan, had come because of known symptoms. In the second group the number of women with scars from previous biopsies and their awareness of the need for periodic check-up, indicated that private physicians are alert for early detection of breast carcinoma.

Gynecologic complaints were admitted in less than 30 per cent of all the women examined. Cervical lacerations with hypertrophy, noted in 117 cases, are ascribed to trauma of childbirth only. Biopsy was advised in 13 of 126 cases of erosion seen in the last 1,000 examinations. Reports by private physicians are incomplete, but to date no cervical cancer has been diagnosed.

Of 41 fibroids in the last 1,000 uteri examined, 16 were of a size to need surgery. Eighty of the last 1,000 patients had had previous hysterectomy, 12 total and 68 subtotal. In none of these had the operation been done for carcinoma, and no evidence of malignancy was found in the remaining cervices.

COMMENT: Periodic examinations of women who are perfectly well have revealed enough unsuspected malignancies to warrant their extension to the majority of women. Only in this way will cancer be found early enough to yield a high percentage of cures. It is almost utopian to believe that the majority of women will subject themselves to periodic examinations, yet we must try to educate our patients concerning their necessity. Certainly every woman who has a family history of malignancy should be urged to have examinations not only twice but three times a year.—G.P.

DIAGNOSIS OF ENDOMETRIOSIS. S. T. Thierstein and E. Allen. Am. J. Obst. and Gynec., May, 1946.

These persons consider the following points in the patient's history to be of diagnostic importance: (1) Dyspareunia, (2) pain in the rectum caused by passage of stool or gas, usually present only during menstruation or intensified at that time, (3) recurrent diarrhea coincident with the menstrual period (superficial bowel implants), (4) symptoms of low grade bowel obstruction such as nausea, cramplike pains, and constipation at menstrual period (implants involving bowel muscularis or mucosa), (5) unexplained sterility, (6) extension of menstrual backache to thigh and often lower leg, (7) abnormally increased bladder irritability at menstrual time, (8) low, deep pelvic discomfort caused by jarring of the body, (9) history of acquired dysmenorrhea in a nullipara, (10) appearance of the symptom complex or findings on palpation resembling those of pelvic infection in a patient over 35 (since pelvic infection is rare during this decade).

The routine use of combined rectovaginal examination of the pelvis is bringing increasingly accurate diagnosis of the condition. Palpation by the rectal finger of a single tender nodule in the cul-de-sac, especially if it is more tender during menstruation, is often indicative of endometriosis. Exquisite "point tenderness" will often direct the examiner's attention to a minute nodule which would be overlooked in the anesthetized patient. The day preceding menstruation is the preferred time for examination.

COMMENT: Endometriosis is a much more frequent disease than is suspected by the profession at large. It should be diagnosed more frequently pre-operatively than it is. When found at operation, the treatment (usually) in women under 40 should not be complete castration. Remember also, the harm that can be done by the use of any estrogenic substance in any endometrial patient *before* or *after* surgical treatment. (Faulkner of Western Reserve University reports reactivation of endometriosis of the bowel 18 months after bilateral oophorectomy had been done when the patient was started on stilbestrol therapy because of vasomotor symptoms.)—G.P.

PSYCHOGENIC RHEUMATISM. Edward Weiss, M.D., F.A.C.P., Department of Medicine, Temple University Medical School, Philadelphia, Pa. Annals of Internal Medicine, Vol. 26, No. 6.

"There must be some kind of a balance to the emotional life — too much expenditure or conflict with too little satisfaction coming in and the patient is headed for emotional bankruptcy." These words of the author make this article well worth reading and furthermore his suggestions regarding treatment are practical and can be used by the average practitioner.

The important thing, as pointed out by the author, is recognizing the patient whose muscular and joint aches and pains are of psychogenic origin and approaching the management of the sick person from the correct standpoint. Tension of emotional origin is cited as the cause of many cases of "rheumatism."

The reader of this article probably will not agree with the author completely, but he will be interested in the treatment suggestions listed. Chronic resentment, smouldering discontentment, is the special emotional problem pointed out by the author but he suggests that it be approached indirectly. He suggests that the patients realize that this is not a disorder of the mind or body, but rather a disorder of their feelings.—W.K.I.

KEY TO ABSTRACTORS

G.P. Grider Penick, M.D.
W.K.I. William K. Ishmael, M.D.

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1. Bickers, W.: Am. J. Obst. & Gynec. 51:100, 1946.

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OBITUARIES

Albert Winfrey Pigford, M.D.
1883-1947

Albert Winfrey Pigford, M.D., 63, prominent Tulsa medical and civic leader, died at his Tulsa home on July 26, 1947, after an illness of several years. A former president and trustee of the Tulsa County Medical Society, Dr. Pigford was known throughout the State of Oklahoma for his surgical ability and as a leader in affairs of organized medicine.

Dr. Pigford was born in 1883 in Lockhart, Mississippi. He obtained his early education at the Barton Academy of Mobile, Alabama. In 1907, he was graduated with the degree of medical doctor from the University of Mississippi Medical College. Subsequently, he did postgraduate medical instruction at the University of Alabama and Tulane University of Louisiana.

Dr. Pigford practiced from 1907 to 1917 at Meridian, Mississippi, where he served as President of the Lauderdale County Medical Society and also as Vice-President of the Mississippi State Medical Association. In 1917, he moved to Tulsa and quickly established himself as a surgeon and gynecologist. During World War I, Dr. Pigford served as a Captain in the Army Medical Corps at Camp MacArthur near Waco, Texas. He served as secretary-treasurer, vice-president, and in 1921, as president of the Tulsa County Medical Society. In later years he was a trustee of that organization and active also in the affairs of the Oklahoma State Medical Association. Dr. Pigford was known particularly for his work in the organization of the Tulsa County Free Medical Clinic in 1939, the establishment of Group Hospital Service of Oklahoma, and activities of Hillcrest Memorial Hospital of Tulsa. An active worker in church and civic affairs, he was forced to relinquish his practice in 1945 due to ill health. He is survived by his widow, one son, one daughter, two brothers, and five sisters.

A resolution of sympathy was approved by the Tulsa County Medical Society on August 8, 1947, as follows:

RESOLUTION

WHEREAS, the members of the Tulsa County Medical Society have been saddened by the passing of Dr. Albert Winfrey Pigford on the 26th day of July, 1947, and

WHEREAS, it is the desire of the Society to take official recognition of the numerous contributions of Dr. Pigford to organized medicine during his lifetime, and

WHEREAS, it is desired to make particular reference to his services as Secretary-Treasurer, Vice-President, President, and Trustee of the Society at various times, to his leadership in the founding of Group Hospital Service of Oklahoma, to his efforts in the formation of the Tulsa Medical Clinic, to his progressive administration as Chief of Staff of Hillcrest Memorial Hospital, and to his valuable services as an officer and worker in the State Medical Associations of Oklahoma and Mississippi, and

WHEREAS, it is further the desire of the Society to call attention to his contributions as a civic and church leader, and to his interest in the field of public health in Tulsa County,

BE IT THEREFORE RESOLVED, that the Tulsa County Medical Society take this opportunity of expressing the high personal and professional regard which its members and officers entertained for Dr. Pigford, their loss at his passing, and to express also the sincere sympathy of the Society to the members of Dr. Pigford's family who survive him.

Approved this 8th day of August, 1947.

William Augustus Ball, M.D.
1872-1947

W. A. Ball, M.D., 72, of Wanette, Oklahoma, died August 5, 1947, at his home in Wanette following an illness of several weeks. Born December 14, 1872, in Georgetown, Tennessee, he received his medical education at the U. S. Grant University in Chattanooga, graduating in 1897, and did postgraduate work in New York, New Orleans, Chicago, and the Mayo Clinic. He practiced several years in Tennessee before moving to Oklahoma in 1899. Dr. Ball opened his office in the pioneer Box community west of Wanette, and in 1906 moved to Wanette, where he lived until his death. He is survived by his wife and two brothers.

Edward Louis Miller, M.D.
1884-1947

E. L. Miller, M.D., of Picher, Oklahoma, died July 18, 1947, at his home in Picher following an illness of several months. Born September 5, 1884, at Beloit, Kansas, he received his medical education at the University Medical College, Kansas City, Missouri, graduating in 1911. Dr. Miller practiced in Craig, Oklahoma, from 1912 to 1914; at Steffenville, Missouri, from 1914 to 1915; and at Grainola, Oklahoma, from 1915 to 1943, with the exception of two years' service as a Flying Medical Officer in the Army Medical Corps in 1917 and 1918. In 1944 he went to Parsons, Kansas, serving at the Kansas Ordnance Hospital until the end of the war. He returned in 1946 to establish a home in Picher.

Dr. Miller served the Grainola community as President of the School Board for 18 years. He is survived by his widow, two daughters, and one son.

Alonzo Sidney Phelps, M.D.
1872-1947

A. S. Phelps, M.D., 75, Oklahoma City, died August 2, 1947. He was born March 20, 1872, at Edgewood, Iowa, and graduated from Hahnemann Medical College, Chicago, in 1900. Dr. Phelps established his first practice in Martinsville, Illinois, becoming also Mayor of the town and President of the local bank. In 1909 he moved to Oklahoma City, where he did much of his work at the old Rollater Hospital, Baptist Hospital (now Mercy Hospital), Wesley Hospital, and Polyclinic.

An appreciation written by Dr. C. N. Berry of Oklahoma City, who was associated with him for 21 years, reads in part as follows: "In all that time I have never known him to do an unkind or uncharitable thing, either to his patients or to a member of our profession. He was a good surgeon and a good doctor of medicine. His work was truly his life, and as a consequence he had hundreds of patients who loved him and who now mourn the passing of a man who in his quiet and unpretentious way did so much good. We who knew him best will always remember him for his great kindness, generosity, and fairness in all things. It was a privilege to have been associated so many years with this good doctor, this real gentleman."

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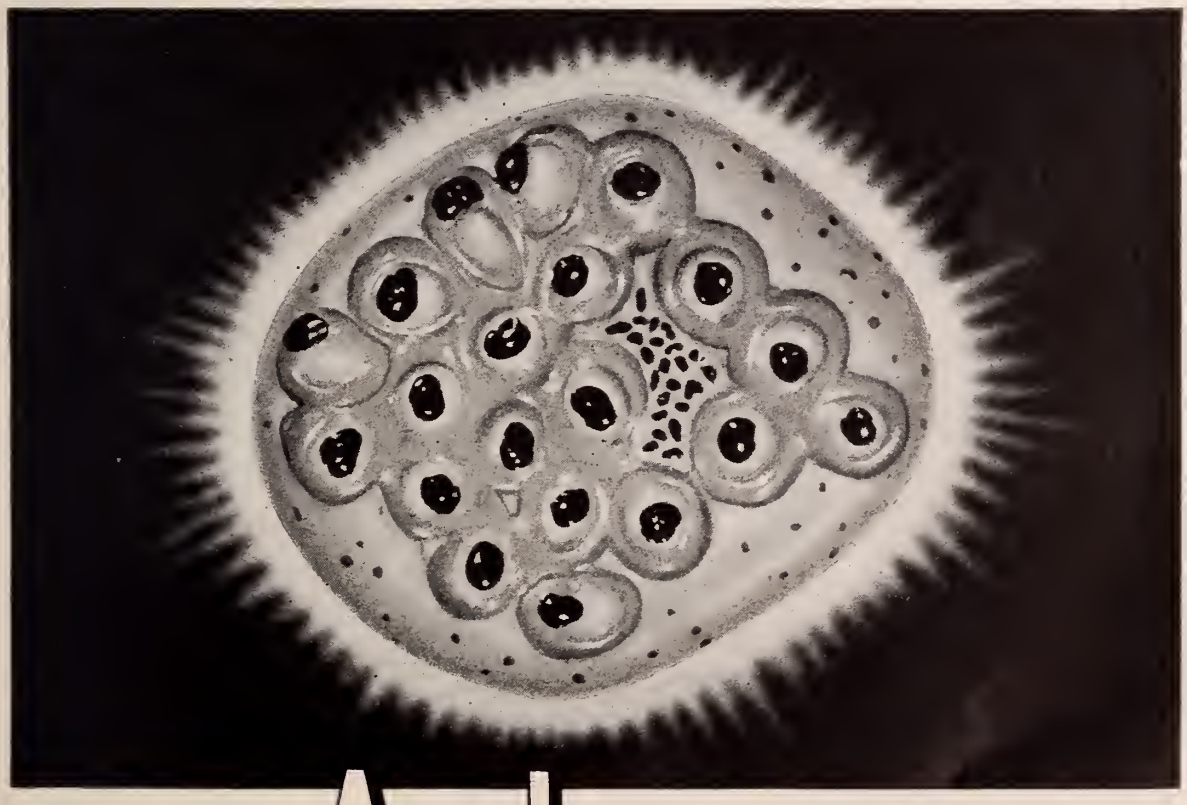
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HAVE YOU HEARD

H. A. Stalker, M.D., Pond Creek, won second place for veterans 70 years or older in the state trap shooting contest at Oklahoma City recently.

C. L. Border, M.D., Oklahoma City, who has been hospitalized at the V. A. Hospital, Will Rogers Field, for several months, has recovered and is now back in his offices in the Hightower Building.

Beginning August 15 *E. P. Allen, M.D.*, who recently retired from his Oklahoma City practice as a leading obstetrician, took over his duties as Chief of Staff of the Oklahoma County Health Association, and has under his supervision the five medical clinics maintained at the Variety Club Health Center. This position is provided for in the Association's constitution, but has never been filled before.

W. Austerman, M.D., has begun the practice of medicine in Konawa with offices adjoining those of Dr. H. M. Reeder. Dr. Austerman received his M.D. from the Albany Medical College, Albany, New York, and served 23 months in the U. S. Army, with 14 months overseas attached to the 130th Station Hospital in Germany.

Ray H. Lindsey, M.D., was elected Commander of the Pauls Valley post of the American Legion recently.

Vernon C. Merrifield, M.D., has established offices in the Royalty Building, Ponca City. Dr. Merrifield just completed a year as house surgeon at St. Anthony Hospital, Oklahoma City. He is an OU graduate, class of 1945.

Playing star roles in weddings held recently in the state were the following: *E. S. Kilpatrick, M.D.*, of Elk City, married to Blanche Creswell, also of Elk City; *David E. Cantrell, Jr., M.D.*, to Mrs. J. H. Cameron, both of Healdton.

Jack C. Mileham, M.D., of Oklahoma City, has taken over the practice of *Dr. John W. (Jack) Adams*, at Chandler, Okla. Dr. Adams is leaving to become pathologist and specialist in internal medicine at the Erlanger Hospital, Chattanooga, Tenn. Dr. Mileham graduated from Oklahoma University Medical School in 1946.

J. A. Graham, M.D., formerly of Clinton, Iowa, has joined the medical staff of the Lindsey-Johnston Hospital-Clinic in Pauls Valley. Dr. Graham is a graduate of the University of Iowa, and served two years of internship and residency at the University Hospital in Oklahoma City before joining the U. S. Army Medical Corps. He served overseas with the 21st Evacuation Hospital, at which time he worked with Dr. Ray Lindsey.

MEDICAL SCHOOL

CALENDAR — SEPTEMBER, 1947

SURGICAL PATHOLOGIC CONFERENCES—Each Tuesday 12:00 Noon to 1:00 P. M.

MEDICAL CONFERENCES—Each Wednesday 9:00 A. M. to 10:00 A. M.

CLINICAL PATHOLOGIC CONFERENCES—Each Thursday 12:00 Noon to 1:00 P. M.

TUMOR CLINICS—First and Third Tuesdays (September 2 and 16) 8:00 A. M. to 9:00 A. M.

UROLOGIC-PATHOLOGIC CONFERENCE—Second Tuesday (September 9) 8:00 A. M. to 9:00 A. M.

MONTHLY STAFF MEETING — Second Friday (September 12) Dinner, 6:15 P. M.

RADIOLOGIC CONFERENCE — Fourth Monday (September 22) 6:45 to 7:30 P. M.

Houston Mount (Med '46) has completed his internship at the U. S. Naval Hospital, Bethesda, Maryland, and was appointed Resident in OB at the U. S. Naval Hospital, San Diego, California.

Dr. Thomas P. Anderson (Med '43) was granted a leave of absence as Medical Officer with the Trans-World Airways, Washington, D. C. He is leaving for Edinburgh about October 1, where he will attend the University of Edinburgh for a three-months' course in Physical Medicine.

Dr. James R. Winteringer (Med '45), *U. S. S. Marias*, Fleet P. O., San Francisco, California, was a visitor at the Medical School while on leave. He has ended a tour of sea duty and is awaiting further assignment.

Ross Miller (Med '46) and Glen L. Berkenbile (Med '46) were recent visitors at the Medical School before reporting for duty in the Army.

A baby formula laboratory service for the purpose of preparing baby formulas, under prescriptions by family doctors, is being incorporated here by Dr. J. L. Gregston, naval medical officer here, and his associates, he announced recently.

Articles of incorporation are now being drafted for the "Formula Laboratories, Inc.," an Oklahoma corporation, with Dr. Gregston, his brother J. W. Gregston of Marlow, and M. G. Manor, of Oklahoma City, as incorporators, he said.

"We plan to prepare the baby formulas according to the prescription of the family doctor, deliver the formula to the mother, and handle the preparation and delivery on a weekly payment basis," Dr. Gregston said.

The doctor said he and his associates hope to have the laboratory ready to start operations September 1.

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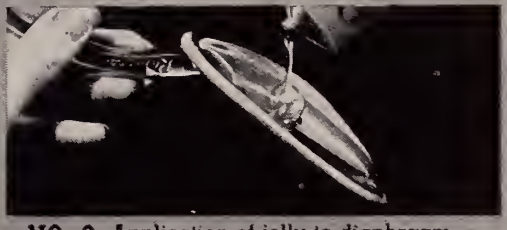
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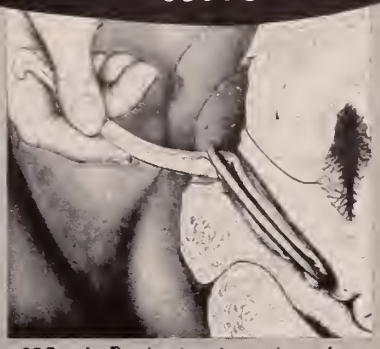
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NO. 2 Diaphragm placed on introducer.



NO. 3 Application of jelly to diaphragm.



NO. 4 Beginning insertion of diaphragm.



NO. 5 Placement of diaphragm.

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OFFICERS OF COUNTY SOCIETIES, 1947

COUNTY	PRESIDENT	SECRETARY	MEETING TIME
Alfalfa	L. R. Kirby, Cherokee	L. T. Lancaster, Cherokee	Last Tues. each Second Month
Atoka-Bryan-Coal-Johnston	J. S. Fulton, Atoka	A. T. Baker, Durant	
Beckham	O. C. Standifer, Elk City	J. E. Levick, Elk City	Second Tuesday
Blaine	Fred Perry, Okeene	Virginia Curtin, Watonga	Third Thursday
Caddo	George W. Conover, Jr., Anadarko	Edward T. Cook, Jr., Anadarko	Third Thursday
Canadian	G. L. Goodman, Yukon	Jack W. Myers, El Reno	Subject to Call
Carter	J. M. Gordon, Ardmore	C. D. Cunningham, Ardmore	Second Tuesday
Cherokee	P. H. Medearis, Tahlequah	R. K. McIntosh, Jr., Tahlequah	First Tuesday
Choctaw-McCurtain-Pushmataha	Reed Wolfe, Hugo	Fred D. Switzer, Hugo	
Cleveland	Orville Woodson, Norman	T. A. Ragan, Norman	Thursday nights
Comanche	Leslie T. Hamm, Lawton	Byron W. Aycock, Lawton	Third Tuesday
Cotton	G. W. Baker, Walters	Mollie Scism, Walters	Third Friday
Craig	P. L. Hayes, Vinita	J. M. McMillan, Vinita	
Creek	O. H. Cowart, Bristow	F. H. Sisler, Jr., Bristow	Second Tuesday
Custer	Willard H. Smith, Clinton	D. W. McCauley, Clinton	Third Thursday
Garfield	Francis M. Duffy, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	Thomas F. Gross, Lindsay	John R. Callaway, Pauls Valley	Wed. before 3rd Thur.
Grady	R. R. Coates, Chickasha	Wesley W. Davis, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	F. P. Robinson, Pond Creek	
Greer	Dwight D. Pierson, Mangum	J. B. Hollis, Mangum	
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis	First Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams, McCurtain	
Hughes	Clyde Kernek, Holdenville	H. V. Schaff, Holdenville	First Friday
Jackson	E. W. Mabry, Altus	J. P. Irby, Altus	Last Monday
Jefferson	J. A. Dillard, Waurika	O. J. Hagg, Waurika	Second Monday
Kay-Noble	E. C. Mohler, Ponca City	Edwin Yeary, Ponca City	Second Thursday
Kingfisher	John R. Taylor, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	J. Wm. Finch, Hobart	R. F. Shriner, Jr., Hobart	
LeFlore	John H. Harvey, Heavener	Rush L. Wright, Poteau	
Lincoln	J. S. Rollins, Prague	Ned Burleson, Prague	First Wednesday
Logan	James Petty, Guthrie	J. E. Souter, Guthrie	Last Tuesday
Mayes	E. H. Werling, Pryor	Paul B. Cameron, Pryor	
McClain	I. N. Kolb, Blanchard	W. C. McCurdy, Jr., Purcell	
McIntosh	F. R. First, Sr., Checotah	W. A. Tolleson, Eufaula	Third Thursday
Muskogee-Sequoyah-Wagoner	W. P. Fite, Muskogee	William N. Weaver, Muskogee	First Tuesday
Northwestern	Myron England, Woodward	C. W. Tedrowe, Woodward	2nd Thurs. Even Mo.
Okfuskee	L. J. Spickard, Okemah	M. L. Whitney, Okemah	
Oklahoma	F. Redding Hood. Oklahoma City Mrs. Muriel Waller, Exec. Secty.	George E. Kimball, Oklahoma City	Fourth Tuesday
Okmulgee	John Cotteral, Henryetta	C. E. Smith, Henryetta	Fourth Tuesday
Osage	R. O. Smith, Hominy	Gayfree Ellison, Pawhuska	Second Monday
Ottawa	B. Wright Shelton, Miami	W. Jackson Sayles, Miami	Third Monday
Payne-Pawnee	C. H. Haddox, Pawnee	C. W. Moore, Stillwater	Second Thursday
Pittsburg	Homer C. Wheeler, McAlester	Edward D. Greenberger, McAlester	Third Friday
Pontotoc-Murray	E. D. Padberg, Ada	Ollie McBride, Ada	First Wednesday
Pottawatomie	Charles F. Paramore, Shawnee	Clinton Gallaher, Shawnee	1st and 3rd Saturday
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	
Seminole	Claude B. Knight, Wewoka	Mack I. Shanholtz, Wewoka	
Stephens	E. H. Lindley, Duncan	E. C. Lindley, Duncan	Third Wednesday
Texas	Daniel S. Lee, Guymon	E. L. Buford, Guymon	Third Wednesday
Tillman	G. A. Tallant, Frederick	O. G. Bacon, Frederick	
Tulsa	E. O. Johnson, Tulsa Mr. Jack Spears, Exec. Secty.	John E. McDonald, Tulsa	Second and Fourth Monday
Washington Nowata	Thomas Wells, Bartlesville	L. B. Word, Bartlesville	
Washita	A. H. Bungardt, Cordell	Aubrey E. Stowers, Sentinel	Second Wednesday
Woods	C. A. Traverse, Alva	O. E. Templin, Alva	Last Tuesday Odd Months

COUNCILORS AND VICE-COUNCILORS

(Figure indicate year terms expire.)

District No. 1: Alfalfa, Beaver, Cimarron, Dewey, Ellis, Harper, Texas, Woods, Woodward—O. E. Templin, M.D., Alva (C) 1950; O. C. Newman, M.D., Shattuck (V-C) 1950.

District No. 2: Beckham, Custer, Greer, Harmon, Jackson, Kiowa, Roger Mills, Tillman, Washita—L. G. Livingston, M.D., Cordell (C) 1948; O. C. Standifer, M.D., Elk City (V-C) 1950.

District No. 3: Garfield, Grant, Kay Noble, Pawnee, Payne—Bruce Hinson, M.D., Enid (C) 1950; R. W. Choice, M.D., Wakita (V-C) 1950.

District No. 4: Blaine, Canadian, Cleveland, Kingfisher, Logan, Oklahoma—Carroll Pounders, M.D., Oklahoma City (C) 1950; Joe Phelps, M.D., El Reno (V-C) 1950.

District No. 5: Cadda, Carter, Comanche, Cotton, Grady, Jefferson, Love, Stephens—J. L. Patterson, M.D., Duncan (C) 1948; J. Hobson Veazey, M.D., Ardmore (V-C) 1950.

District No. 6: Creek, Nowata, Osage, Rogers, Tulsa, Washington—Ralph McGill, M.D., Tulsa (C) 1949; Ralph Rucker, M.D., Bartlesville (V-C) 1950.

District No. 7: Garvin, Hughes, Lincoln, McClain, Murray, Okfuskee, Pontotoc, Pottawatomie, Seminole—Clinton Gallagher, M.D., Shawnee (C) 1950; Ned Burleson, M.D., Prague (V-C) 1950.

District No. 8: Adair, Cherokee, Craig, Deleware, Mayes, Muskogee, Okmulgee, Ottawa, Sequoyah, Wagoner—J. G. Edwards, M.D., Okmulgee (C) 1948; W. J. Sayles, M.D., (V-C) 1950.

District No. 9: Haskell, Latimer, LeFlore, McIntosh, Pittsburg—Earl Woodson, M.D., Poteau (C) 1948; E. H. Shuller, M.D., McAlester (V-C) 1950.

District No. 10: Atoka, Bryan, Choctaw, Coal, Johnston, Marshall, McCurtain, Pushmataha—W. K. Haynie, M.D., Durant (C) 1950; W. W. Cotton, M.D., Atoka (V-C) 1950.

THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

FETAL AND NEONATAL MORTALITY

In the August, 1947, number of the American Journal of Obstetrics and Gynecology, Labate[1] discussed this subject in the light of 868 autopsies. He shows that in the past decade reduction in fetal and neonatal mortality has not kept pace with reduction in the maternal rate. The physicians who bring Oklahoma babies into the world should read this interesting article and gird their loins for better obstetrical service.

The author lists the four major causes of fetal and neonatal deaths as follows: "(1) Prematurity; (2) pulmonary lesions; (3) birth trauma; and (4) maceration, following antepartum or intrapartum fetal deaths, often of unknown cause."

Quoting from a table showing all causes in relation to their relative importance, we find the following: "Prematurity, 27.6 per cent; lung lesions, 22.5 per cent; birth trauma, 16.9 per cent; maceration, 16.5 per cent; congenital anomalies, 7.4 per cent; syphilis, 4.5 per cent; erythroblastosis, 1.7 per cent; sepsis, 1.4 per cent; cause unknown, 0.8 per cent; miscellaneous causes, 0.4 per cent."

It is interesting to note that after prematurity, various types of lung lesions produce the largest number of deaths and that 60.2 per cent of these are due to aspiration of amniotic fluid. Pneumonia claims 27 per cent, hemorrhage 10.2 per cent, hyaline membrance two per cent, and cystic lung 0.6 per cent. Birth trauma and the complications of pregnancy also receive graphic listings with "intracranial lesions," 76.8 per cent leading the trauma group and "no material cause" making up 52.2 per cent of the complications of the pregnancy group.

The author refers to two other similar reports in recent years, each dealing with approximately 1,000 autopsied cases. He stresses the similarity in the findings but admits seeming discrepancies arising through the employment of different terms with virtually identical meaning, expressed by the pathologist in one and the clinician in the other. Thus the pathologist's term, "aspiration of amniotic fluid," corresponds to the clinician's, "asphyxial state."

No doubt some of these fetal and neonatal causes of death are insurmountable but the physicians of Oklahoma should strive to give every child and every mother the best possible chance. Only by discharging our duty to them can we hope to improve our position in the nation's statistical columns.

1. Labate, John S., B.S., M.D., A Study of the Causes of Fetal and Neonatal Mortality on the Obstetric Service of Bellevue Hospital, American Journal of Obstetrics and Gynecology, 54:188, (August) 1947.

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THE SEVENTEENTH FALL CONFERENCE

Though still in its teens, the Oklahoma City Clinical Society is mature in its educational performances. On October 27, 28, 29, and 30, the usual diversified scientific program will be under way.

A large number of guest speakers from widely separated medical centers will send the latest scientific advances through loud speakers to every corner of the packed Biltmore Civic Room.

For the benefit of those seeking well-rounded discussions on special subjects, there will be conveniently timed postgraduate symposia.

The Medical and Surgical round table luncheons will enable the quizzically minded to put the boys from the medical centers on the spot. This is the time to "stump the experts."

The annual Chamber of Commerce Clinical Dinner represents a unique blending of civic and medical interests. This is where the home folks greet all guests and their families with open arms.

The President's Dinner given by the Oklahoma County Medical Society in honor of the President of the American Medical Association is always a stimulating and pleasurable occasion.

The annual Smoker is a "stag party" with exciting stage possibilities. Regardless of the participant's age, it is fun. This conference offers unexcelled postgraduate possibilities.

THE COOPERATIVES

In the August 23 *Saturday Review of Literature* there is an extensive review of Bertram B. Fowler's book *The Cooperative Challenge*. Admitting that Mr. Fowler has made an exhaustive study of the cooperative movement throughout the world and that he may be able to speak to businessmen on this subject with authority, but judging from what he so glibly strikes off about the cooperative movement in medicine, businessmen should take what he says with a grain of salt.

The readers of the Journal will be interested in the following paragraph from Fred Smith's review:

"Cooperatives have made important inroads in medicine, against the best-laid plans and almost irresistible powerhouse punches of the AMA. It started when an unknown doctor in a Western village talked his patients into putting up money for a cooperative hospital. The plan was simple: You pay $50 for a life membership and $25 a year. You and your friends own the hospital, pay the salaries of the staff, and use the facilities as much as you please. In case of a major operation, you pay a few extra charges, but the total bill comes to around $50 instead of $300 or so. This first hospital succeeded rapidly, acquired a large and competent staff, and served both members and non-members for miles around. A man in Texas heard about it and one was started in that state. Then the cat was out of the bag and cooperative hospitals were launched in scores of places. The AMA, fearing socialized medicine, did everything possible, up to and including an attempt to revoke the license of the physician who started it all; but they lost. They tried to pass a bill through the Texas legislature to outlaw cooperative hospitals. They lost again. Strangely enough, however, they did succeed in limiting cooperative hospitals to towns under 2,500 population — a stipulation that dosen't prevent the construction of a cooperative hospital outside a large city, for the benefit of the large city. It was face-saving victory."

Mr. Fowler should know that if it were not for the "almost irresistible powerhouse punches" of the A. M. A. in its cooperation, collectively, with nature and science against disease and the personal cooperation of its individual members with their patients, rich or poor, with the people sound or unsound, and with the public health agencies, he might not be here to fight with so much vigor for cooperative inroads in medicine. Likewise he should know that the more rapid the inroads on medicine as a private enterprise, the less the chances for his grandchildren to achieve health, happiness, and a reasonable longevity.

WHEN THE ART BECOMES A SCIENCE

Many a struggling soul has gone on the rocks while awaiting the body's return to dust.

When on account of incurable disease the physician finds that he is unable to save the body, he should succor the soul. He can tell responsible members of the family the whole truth while artfully protecting the patient. As a rule, time gradually brings a consciousness of the otherwise cold facts, and prepares the way for an inevitable fate. Often slowly dawning knowledge gathers fortitude and this in turn brings resignation. In this

way both patient and physician may be spared acute psychological pain.

Recently an anxious patient was referred to a great surgeon. A difficult exploratory operation revealed an incurable condition. Postoperative shock threatened immediate disaster, but skilled management saved the patient's life. She had bravely submitted to surgery and now courageously she looked to the surgeon for further help and guidance. Rather than tell her the whole truth, he reached an understanding with her family, and decided to sustain her with guarded hope which she might cherish until time eased the dawning consciousness of failure. Certainly there is growth of character in the struggle and this helps to negotiate that last incomprehensible act in the cycle of life.

In his funeral speech before mothers who had lost sons in the Peloponnesian War, Pericles was fostering reconciliation when he said, "They may be thought fortunate who have gained most honor, whether an honorable death like your sons, or an honorable sorrow like yours." This surgeon was following a similar course when he accorded credit for unusual courage and good behavior. The patient was managed so skillfully that when she was returned to her own physician she and her loved ones were high in their praise of the specialist who, though failing to cure through the application of his scientific skills, made a science of the art and brought a certain degree of success out of failure. Even the family physician was blessed for having referred them to such a fine doctor. In addition to the applied art in the normal, professional contacts, there are certain gracious approaches which fall outside the considered line of duty and which have a potent inspirational and moral influence.

This patient received flowers and strawberries from her surgeon with cards which meant more than the gifts, "picked from my own garden specially for you." Suffering and sustained courage, and even dying are made easier by thoughts and things "specially for you."

Henry Sewell once said, "How soothing when the time for all mechanistic aid has passed is the intelligent sympathy of the family doctor!"

Without sincerity and humility the art of medicine becomes a despicable artifice and should not be tolerated by patient or profession.

COUNTY MEDICALS PLEASE TAKE NOTICE

This significant statement from the President's page in the September issue of the Bulletin of the Tulsa County Medical Society, signed by E. O. Johnson, is being reproduced with the hope that it may be brought to the attention of every member of the State Association. It speaks for itself and needs no editorial support.

"The Oklahoma State Medical Association has been doing some excellent work in the past two or three years in strengthening relationships between medicine and its allied professions, dentistry and pharmacy. This is a splendid program which our Tulsa County Medical Society highly endorses, and one which every county medical society in Oklahoma should initiate individually as well. Much is to be gained by a closer harmony between these professions, and the cooperative effort in attaining mutual goals will pay handsome dividends. As doctors, we have perhaps been guilty in past years in considering the members of the dental and pharmacy professions as mere competent mechanics. The rounded training now received in American dental schools no longer justifies this type of thinking. The dentist of today has a full knowledge of the pathological and the histological, and an increasing ability to recognize conditions associated with each. Similarly, our pharmacists by their educational requirements and increasing standards of professional conduct are attaining new stature. Finally, we must not overlook the fact that criticism of pharmacy and dentistry as being mechanical arts is one equally applicable to medicine. Surgery is largely mechanics with a large appreciation of tissues and their responses, for instance.

"All three of these professions contribute much individually, and their independence necessitates the closest degree of cooperation. I believe that we have much to gain by a cooperative program with dentistry and pharmacy. . . . The potentialities are great."

GRACIAN ON GREAT MEN

"Great men are a part of their times. Not all were born into a period worthy of them, and many so born failed to benefit by it! some merited a better century, for all that is good does not always triumph: fashions have their periods and even the greatest virtues, their styles: but the philosopher has one advantage, he is ageless; and should this not prove his century, many to follow, will."—Gracian.

SCIENTIFIC ARTICLES

CURRENT PROBLEMS IN PUBLIC HEALTH*

JOHN F. HACKLER, M.D., M.P.H.
Professor, Preventive Medicine and Public Health
University of Oklahoma School of Medicine
OKLAHOMA CITY, OKLAHOMA

In considering the many problems of the day with relationships to the health and wellbeing of the public, one is tempted to generalize rather than specifically point to activities and programs which, through concerted and united effort, analysis, and in some cases research, offer some hope of alleviation in the near future.

Of world interest is the formation of the World Health Organization, the constitution of which is currently being considered for adoption by the various nations. This sets forth the philosophy of international health relations that it is in the interest of the more advanced nations in health matters to assist less fortunate nations. To this organization are transferred the health functions of UNRRA and the League of Nations.

On the national scene, two important current developments are:

(1) The National Mental Health Act which provides for research and other facilities for development of a preventive attack on mental illnesses which affect about 8,000,000 Americans and fill over one-half the country's existing hospital beds. This will enable states to organize a preventive attack and to coordinate such a program as may be developed with the curative program, particularly as regards follow-up supervision of patients released from hospitals. Consultant service, mental health clinics for adults, and child guidance clinics can be started in strategic locations, and perhaps periodic services can be furnished in some more isolated areas as has been done in Oklahoma under the crippled children's program and the cancer program.

(2) The Hospital Survey and Construction Act establishes a national policy for planning, location and construction, and operation of hospitals and health centers in relation to the needs of the people within a state or community.

Both these programs will be administered by the USPHS through grants-in-aid to the state agency designated by each state, on the basis of population, need, and financial ability of the state to meet the needs. In Oklahoma, the State Department of Public Health is the designated agency. This agency has enjoyed the full support of the medical profession of the state and together they have maintained our Sooner spirit and tradition by being among the first states to complete the necessary legislation to permit participation in the federal hospital program and to complete the statewide survey of existing hospital facilities and needs. You no doubt recall that the Oklahoma Rheumatic Fever Program was the first to receive federal approval.

Our long range state plan for hospital construction will be submitted for approval in the near future, and it is anticipated that individual projects will be ready for approval and the start of construction soon after July 1, 1947, when it is now anticipated the first federal funds will be available for allocation. Oklahoma's allotment is now established at $1,640,000 per year for five years. Determination of allotments to states and in turn to individual projects is based on relative needs and undoubtedly those 20 counties now without suitable hospital facilities will receive first consideration if they are interested and can provide their two-thirds of construction cost together with a suitable plan for operation and maintenance. Local participation can be by the state, county, city, or by any non-profit organization or association. General hospitals receive first consideration. Tu-

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berculosis, mental, and chronic disease hospitals are also eligible, as well as health centers.

I should like to make a special plea to those of you from areas anticipating construction of city, county, or city-county hospitals. For only a slight additional over all cost to the community, health center facilities can be included. Joint x-ray and laboratory facilities, libraries or reading and staff conference rooms, and perhaps even reception or waiting rooms can be utilized. In fact, it is not inconceivable that a good physician trained in medical administration might serve both the hospital and health department in many areas. As full-time health service is extended to new areas, facilities will be necessary. Community planning must include these if the total health needs are to be met.

One of the important recommendations of the American Medical Association in its 10-point National Health Program is that full-time health service be extended to the entire population. This is perhaps one of the most important current problems in Public Health. Reasonably adequate coverage can be given with 1200 local departments.[2] At present less than one-half of the 3,070 counties in the United States, representing one-third of the population or 40,000,000 people, have local organized health services available. Many of those areas organized are without health officers and are short in nursing staff at present. The shortage of professional health personnel, like that of teachers, is closely related to adequacy of compensation and present living costs.

More specifically, in Oklahoma 29 departments cover 38 of the 77 counties and the two larger cities with full-time health service — 68 per cent of the population. Many other counties have expressed their desire for such service as soon as personnel become available. Plans have been suggested for statewide coverage with 32 units, with an average population of 73,000 per unit. By combining city, county, and school health services, or two or more counties under one department where the population does not justify a single department, much duplication of some of the more expensive administrative staff can be eliminated. Such a plan would call for about 50 full-time physicians and utilize the services of about 138 part-time clinicians. This long range program for Oklahoma would also require about 475 nurses and 60 sanitary officers in addition to the necessary clerical personnel. The estimated cost of such a program is about $1.00 per capita per year. A broadened program of health education must be maintained until local areas are willing to support a program to that extent. Additional funds from state and federal sources can supplement the state program and assist local areas on the basis of special health problems and financial ability.

Physicians interested in the public health can no longer delay thoughtful study and planning in relation to provision of medical care. Beginnings have been made by medical society sponsorship working jointly with the official health agencies in Tulsa, in Muskogee and Seminole counties, and perhaps other areas here in Oklahoma. Several state programs have been developed such as the Maryland Medical Care Program. Still other plans have been inaugurated in cities like Baltimore, New York, Richmond, and Topeka. In Topeka, Kansas,[2] the health department provides space, laboratory, nursing and clerical service. Professional services are provided through the County Medical Society. The plan includes both home visits and a regular out-patient clinic and includes those families certified as medically indigent by the Public Welfare Agency. Payments are made on an insurance basis from county funds appropriated through the Welfare Department. Physicians cooperating are paid on the basis of a unit fee schedule established by the Medical Service Board of the County Medical Society.

Health agencies have been reluctant to extend their sphere of activity from sanitation and preventive medical services to the broader field of medical care. Yet they must accept such responsibility for they are in most instances the designated governmental agencies for matters related to medical problems. While cooperation with welfare agencies is necessary, health departments furnish the medical perspective or physician's viewpoint necessary to any program of medical administration. Health officers receive training and experience in administration. Even more training in hospital and medical administration might be desirable for those who are to assume direction of an indigent medical care program. To get that type of person, salaries, opportunities for advancement, tenure, and retirement plans must be commensurate with the responsibility assumed. Salaries must equal at least the average net income from private practice if competent persons are to be attracted.

The field of geriatrics is becoming more and more important each year as our population is aging. According to U. S. census figures, and reliable estimates for the future,[3] the percentage of persons over 45 years of age in the U. S. has increased from one-fifth of the total population in 1920 to over one-fourth in 1940. By 1960, one-third of our population will be over 45 years of age, and one person in ten will be 65 years of age, or over. If one cares to continue the estimate to 1980 when it is expected that the present increase in population will cease at about 150 million, we shall have 60 million persons 45 years and over and more than 21 million 65 years and over.[4]

What effect will this have on chronic diseases and disabilities associated with advancing age, to say nothing of changes in employment, economics, retirement, etc.? In 1900 the first and second of the leading causes of death were tuberculosis and pneumonia and these two diseases accounted for one-fifth of all deaths. Now they rank sixth and seventh. At present, of the first five causes in order of magnitude, four — heart disease, cancer, cerebral hemorrhage, and nephritis — are diseases more frequent in middle life and old age. The fifth — accidents — can happen any time. Diabetes and arteriosclerosis, the eighth and tenth leading causes, are also typical in later life. These six causes accounted for over three out of every five deaths in 1944. In fact, over one-half of the deaths from tuberculosis and pneumonia occurred at or after age 45.[3]

Both the medical profession and the lay-public are to be congratulated upon their current and rapidly increasing interest in research and the control of cancer. Three weeks ago, Dr. Ochsner of New Orleans, in an address at the meeting of the Southern Branch of the American Public Health Association at Memphis, stated that cancer must be treated before diagnosis is possible. By doing that, cancer control is a reality. When a clinical diagnosis is made, only five per cent of cases live five years or longer. This is particularly true of the "Doctor's Cancer," as Dr. Ochsner calls cancer of the stomach, for it is slightly more prevalent among physicians than other groups. He further stated that any man past 40 years of age with a lesion of the stomach must be treated as if it were cancer, that every gastric ulcer is potential cancer and should be seen by a surgeon, and that removal while "benign" is conservative.

Dr. Ochsner further told of experiences at Tulane University Medical School with the well-person cancer detection clinic which has been in operation for the past two years. One and one-half per cent of the persons seen have been found to have cancer — early and curable. Fifteen per cent had precancerous lesions such as polyps, nevi, scars, etc. This is cancer prevention. Just as interesting also, he reported that 25 per cent of these "well persons" were suffering from other conditions such as tuberculosis, diabetes, etc.

In another study, Dr. George T. Pack[5] has reported on a series of 1,000 cancer cases with regard to the delay in securing a diagnosis and instituting appropriate treatment. The patient alone was responsible for delay in 44 per cent of the cases; the physicians alone, in 17 per cent, while both patient and physician were at fault in 18 per cent. In only 21 per cent was there no serious delay on the part of either. Well-person cancer clinics, together with a sustained educational program for both physicians and the public, are indicated. In addition to expanding clinics and education, hospital facilities, pathological service, and statistical research are essential, and these factors constitute what Dr. Lombard[6] calls the "basic plan for future cancer control."

What about diabetes? From 1900 to 1940 this disease climbed in rank as a cause of death from twenty-fifth to ninth place.[7] The National Health Survey (1935-1936) figures reveal that there are 660,000 known diabetics in the United States. Joslin, et al, estimate over one million. According to prevalence rates of the survey, three-fourths of these are 50 years of age or over. We know much about the cause, diagnosis, treatment, and complications of diabetes. Early diagnosis is very important. Yet only $30,000 per year, or five cents per case, is donated for study and control of this disease each year as compared to $15 million ($22.00 per case) for tuberculosis and a like amount for cancer. An educational program is needed in this field. A demonstration program now in progress in Oxford, Massachusetts, under the auspices of the U.S.P.H.S., will perhaps give us a practical plan for integration of diabetes control into a local generalized health department program.

SUMMARY

What are the major current problems in public health?

1. Extension of full-time local health service to the entire population.

2. Improved hospital facilities, particularly in rural areas, to better serve the public and to attract physicians to these areas.

3. A mental health program with emphasis on preventive aspects.

4. Greater interest in research and application of present knowledge in the field of geriatrics with particular emphasis on those diseases now causing the major portion of deaths — cancer, diabetes, and diseases of the heart, arteries and kidneys.

5. Further study, cooperative planning, and experimentation in methods of providing indigent medical care.

I cannot close without adding a few words about the importance of a broad sustained program of health education covering factors necessary both to personal and to community health — nutrition, maternal and child care, communicable disease control, preventive medical services, and environmental sanitation. While our legislature has recently provided for the beginning of a program of health and physical education in our schools, it is up to the medical and public health professions to extend this service to the older age groups who after all pay the bills and suffer the effects of disabling and preventable illness and premature death.

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THE USE OF CURARE IN ANESTHESIA*

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Curare has been a pharmacological curiosity for a great many years. About the middle of the last century some attempts were made to find a practical use for the drug but because of the variable potency of different lots and inability to isolate the active principle, these attempts ended in failure. It was not until 1935 that King was able to isolate the active principle to which the name d-Tubocurarine chloride was given. A standardized and purified preparation was put on the market under the name Intocostrin.

In 1942 the first reports of the use of curare in anesthesia appeared. The first of them was written by Griffith, the second by Cullen.

Therapeutic doses of curare paralyze the skeletal muscles, the point of action being the neuro-muscular end organs. The first muscles to be affected are those innervated by the cranial nerves, next the muscles of the trunk, the extremities, and finally the muscles of respiration. The diaphragm is the last to be affected.

Curare has no anesthetic or analgesic properties. It has been well demonstrated that in the presence of complete paralysis from curare, consciousness remains until clouded by the effects of oxygen want.

Since curare has no anesthetic properties, it must be used in conjunction with one of the general anesthetics. The patient may be maintained in a light plane of surgical anesthesia while adequate relaxation is obtained by the use of curare. This combination of drugs removes the need for the very deep levels of anesthesia required for certain surgical procedures. There is less tendency to shock, and the recovery period is both more rapid and pleasant. Surgical procedures within the abdomen are greatly facilitated by the complete relaxation which may be obtained.

The first clinical trials of curare (Intocostrin) were made with patients under cyclopropane anesthesia. Since that time the drug has been used in combination with nitrous oxide, sodium pentothal, and ether, alone and in various combinations.

Anesthesia is induced in the usual manner, and carried to the first or second plane of stage three. The curare is administered intravenously a few minutes before the need for muscular relaxation is anticipated. Some effect appears almost immediately, and the full degree of relaxation is obtained in about five minutes. If the initial dose of curare has been too small, as evidenced by inade-

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quate relaxation, additional amounts may be given at intervals of ten minutes until the desired effect is obtained.

The amount of curare required is dependent upon the size and age of the patient, and upon the type and depth of the anesthetic being used. Under cyclopropane anesthesia, adults of average size will require an additional injection of 50-60 units of curare. For aged, debilitated patients the dose should be reduced to 20-40 units. The size of subsequent injections is best determined by the response to the first one. The relaxation afforded by curare will last for a variable length of time, 35 minutes being the average, though in many cases it is not necessary to repeat the curare for nearly an hour.

An overdose of curare results in depression of respiration. This may vary from a slight decrease in breathing to complete apnea. The very mild depression may require no treatment; the moderate depression should be treated by augmenting the patient's respiratory efforts, and the more complete apneas are best treated by artificial respiration. As breathing becomes depressed, there is usually an increase in blood pressure, due to retention of carbondioxide. Rarely the blood pressure falls. Severe depression of breathing seldom lasts longer than 10 or 15 minutes, unless a very gross overdose of curare has been given.

The chemical antidote for curare is prostigmine, one cc. of the 1:2000 solution being given intravenously. This may be repeated if necessary. However, efficient artificial respiration with oxygen is generally considered to be the superior treatment.

When used in conjunction with ether anesthesia, the dose of curare is relatively small, as ether has a curare-like effect, and this combination of drugs is much more depressing to the respiration. Here the initial injection of curare is 20-25 units, and even then transient periods of apnea are not rare.

Rather large amounts of curare are required if nitrous oxide-oxygen anesthesia is used. The average young male adult will tolerate 80-100 units of curare as the initial injection.

Curare has been used in combination with sodium pentothal with satisfactory results. Since pentothal is a respiratory depressant the curare should be given cautiously, about 20 units at a time, until the desired degree of relaxation is obtained. The mixing of curare and pentothal solutions results in a heavy floculante precipitate. Therefore, the use of separate syringes is advocated, although there is some evidence to show that the precipitate quickly dissolves if injected into the blood stream, and produces no harmful effects. Baird has described the technic of mixing pentothal and limited amounts of d-Tubocurarine without the formation of the precipitate.

With any of the above combinations of curare with a general anesthetic, troublesome respiratory reflexes may be initiated if the degree of anesthesia is too light. The same is true, of course, when curare is not used. These reflexes are usually partial or complete spasms of the pharynx, the vocal cords, or the bronchioles. Increasing the depth of anesthesia will clear up the trouble quickly, and is a more logical and safe treatment than the injection of more curare. True, curare will frequently clear up such a spasm, but not always with entire safety. Difficulty has been reported in artificially ventilating patients completely paralyzed with curare, due probably to a persistent spasm of the bronchioles.

There are two definite contraindications to the use of curare preparations. These are (1) myesthenia gravis, and (2) inability or lack of facilities for adequately carrying on artificial respiration, should it be required. Any of the ordinary machines used to administer anesthesia will meet the second requirement, if properly used.

Curare has been satisfactorily employed in patients with the various types of heart disease. For such patients the drug should be given in smaller doses of not more than 20 units at a time, repeated as indicated. One should probably be satisfied with less relaxation than would be desirable in the more normal patient. It has been found that larger injections of curare frequently produce a drastic fall in blood pressure in cardiac patients. A few fatalities have been reported.

Following very prolonged operations during which large amounts of curare have been used, several hours may elapse before the patient completely regains muscle tonus. During this time, careful nursing care is required, especially with regard to the patency of the airway. Normally, however, the curare effect will have disappeared by the time the patient reacts from the anesthetic.

SUMMARY

The use of curare in conjunction with general anesthetics has been discussed, Excellent muscular relaxation is obtained, provided certain precautions are observed.

THE EARLY DIAGNOSIS AND TREATMENT OF PRIMARY PULMONARY TUBERCULOSIS IN CHILDREN*

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One of the chief characteristics which distinguishes pediatrics from other medical specialties is its emphasis on the prevention of disease. To a greater extent than in any other field of endeavor there is the opportunity and the obligation to safeguard the patient from the many dangers that beset his path. In the role of physician to the child one has the peculiar privilege of dealing with an individual not yet contaminated by the ways of the world. Since to prevent disease is a greater thing than to cure it, the real measure of our effectiveness as physicians lies in this protective function.

Among the many diseases from which the child should be protected few are so important as tuberculosis. In spite of the steadily decreasing incidence of the disease,[1] and the sanguine hopes that we may live to see it a rarity in America, there are still far too many cases and too many useless deaths. While to a great extent poor economic status and the defective health education of the people contribute to this needless morbidity and mortality, the medical profession, as a whole, is not making the concentrated attack on the disease the situation merits. Notable exceptions to this statement have occurred in localities where preventive medicine is at its best.[2] By and large, however, it is still not a general rule to survey every child for the presence or absence of this disease, so likely to be mild in the primary form, so prone to be devastating in the reinfection phase.

It is the purpose of this paper to present in a condensed form for the general practitioner a present day pediatric approach to primary pulmonary tuberculosis in children. The core of that approach is the routine survey of every child for the presence or absence of the disease, the detection of the tuberculous adult from whom the infection was derived, and the breaking of the contact between the child with the primary infection and the adult in the communicable phase. This approach is founded on the fact that the child with the primary infection who continues to be exposed to additional tubercle bacilli is more likely to break down with the reinfection form of the disease.

Unfortunately, from the standpoint of the early diagnosis of tuberculosis in children, the training of medical students and of physicians has long been directed largely toward the detection and treatment of clinically evident cases of tuberculosis in the adult population, with far too little consideration of the manner in which the disease manifests itself in the child. The student learns with painful thoroughness the classical symptoms of fatigability, fever, night sweats, weight loss, chest pain, cough, and hemoptysis, and he listens with attentive zeal for telltale apical rales, or the dramatic signs of advanced cavitation. He is accustomed to having the chest roentgenogram bear out his clinical impression and to find with reasonable facility the tubercle bacilli in the sputum. When he thinks of therapy it is in terms of hospital or sanitorium care, the possibilities of collapse therapy, and, more recently, what may or may not be expected of streptomycin. What is not so likely to have been impressed upon the student is that the picture of primary tuberculosis as it usually affects children is vastly different[3,4]; that children seldom have symptoms which arouse suspicion of the existence of tuberculosis; that physical examination, except insofar as it gives evidence of the general health of the child or evidence of far advanced tuberculosis, is practically useless in the diagnosis of the usual case; that ordinary chest

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roentgenograms are normal in the majority of children who have, or have had, primary tuberculosis; that a positive tuberculin test is almost essential for a correct diagnosis; that the tubercle bacillus in the child is usually found by examination and culture of the gastric washings; and that the chief treatment for primary tuberculosis is to insure an environment free from contact with cases of tuberculosis in the communicable stage.

THE TUBERCULIN TEST

Since in primary tuberculosis in children symptoms are so often lacking, physical findings so frequently normal, and chest roentgenograms negative in such a high percentage of cases, the chief screening agent to find out which children have, or have had, tuberculous infection is the tuberculin test. When an individual becomes infected with the tubercle bacillus there develops within a few weeks allergy to the protein fraction of the bacillus, the tuberculoprotein. This allergy or hypersensitivity can be detected by tuberculin skin tests, of which there are several varieties. The two types now generally used are the intradermal tuberculin test and the tuberculin patch test.

In performing an intradermal tuberculin test, there are two testing substances which may be employed. One substance is called old tuberculin, and the other is called purified protein derivative. The latter is somewhat more sensitive and is probably preferable, although there is no great difference in the results if both are used properly. If old tuberculin dilutions are used, an initial test with 0.1 cc. of a 1:1000 dilution is the common routine screening policy, unless one has reason to suspect tuberculous infection. If infection is suspected, it is wiser to start with a 1:10,000 dilution, in order to avoid severe reaction at the site of injection and elsewhere in the body. If the test is negative, and tuberculosis is still suspected, increasingly stronger dilutions are used until the test is positive or clearly shown to be negative. As a rule, if a 1:1000 intradermal test is negative in a child tested routinely for screening purposes it is not considered necessary to carry out additional tests with stronger dilutions.

Intradermal tuberculin testing with purified protein derivative may be done with 0.1 cc. of first strength purified protein derivative, or with second strength purified protein derivative. The latter solution is 250 times stronger than the first strength solution. This great strength of the second solution is a disadvantage from two standpoints: (1) It has been shown that 0.1 cc. of second strength purified protein derivative may be antigenic and thus produce a falsely positive test,[4,5] and (2) the solution is so strong that, if the patient is highly allergic, an undue reaction at the site of injection may be experienced, as well as reactions at sites of tuberculous infection elsewhere in the body, notably in the lungs. I have several times seen severe local reactions to second strength purified protein derivative when 0.1 cc. was injected intradermally after a negative or questionably positive first strength test. Because of these possibilities of antigenicity, or undue reaction, it is advisable to give only one half of the commonly used dose of second strength purified protein derivative, or 0.05 cc.

The Vollmer (Lederle) tuberculin patch test is a very convenient and reliable testing substance. The patch test, properly applied, detects about 90 per cent of children who have, or have had, tuberculous infection, and corresponds approximately with the 1:1000 intradermal test with old tuberculin. In my experience,[6] the patch test stands midway in sensitivity between the first and second strength purified protein derivative. For this reason, it is my own policy to begin testing with the patch test, bypassing the first strength purified protein entirely. If the patch test is negative, 0.05 cc. of second strength purified protein is used.

SIGNIFICANCE OF POSITIVE TUBERCULIN TEST

If proper precautions have been observed in not using a testing solution so strong that it is antigenic in itself, a positive tuberculin test simply means that at some time in the past life of the individual he has been infected with tubercle bacilli, and has, therefore, become allergic to tuberculoprotein. Despite attempts to correlate the severity of the local tuberculin reaction with the degree of activity of the tuberculous lesion in the body, no useful clinical method is available for this purpose. It cannot be said definitely that the more severe the tuberculin reaction the more active the disease process. However, since it may take a year or two for a primary tuberculous focus to heal with fibrosis or calcification, the younger the child with a positive tuberculin reaction the more likely it is that one is dealing with a still active lesion.

SIGNIFICANCE OF NEGATIVE TUBERCULIN TEST

In the great majority of cases, children

who have negative reactions to properly performed tuberculin tests have not had, and do not now have, tuberculous infections. It is highly important, however, to realize that there may be various factors at work which cause a child who is sensitive to tuberculoprotein to fail to react to the test. Some of these factors are: (1) improper technique of testing; (2) testing in the prodromal stage of the disease before allergy to tuberculoprotein has been achieved; (3) testing the moribund tuberculous child in the end stages of the disease when the body is flooded with antigen to such an extent that antibodies are all used up: (4) testing during or soon after any severe intercurrent illness which has lowered the reactive power of the body (anergy) ; and (5) testing older children who have conquered their early tuberculous lesions and have lost their sensitivity to tuberculoprotein.

Of the factors mentioned, one of the most common errors is improper testing technique. As examples of poor technique, one may cite loose application of the patch test so that contact with the skin is not tight; putting the patch test on the front of the chest where the child can pull if off rather than on the back of the chest; failure to use acetone or ether to defat the skin before application of the patch test; in intradermal testing, the use of a syringe in which the piston does not fit the barrel properly and allows some of the solution to back up in the syringe, thus causing failure to inject the proper amount into the skin; injecting a portion of the material under the skin of a struggling child rather than injecting the proper amount into the skin; and, finally, using testing material which is old and inert.

The second main error in tuberculin testing is inherent in the policy, prevalent in many children's hospitals, including our own, of applying a tuberculin test to all children on admission to the hospital. It is apparent that a great number of such children entering a hospital treating acute conditions will have such severe illnesses of one sort or another that they will fail to react to the tuberculin test. Doubtlessly, many children who would otherwise react positively are thus called negative reactors, and are therefore denied further supervision, including chest films and family follow-ups for tuberculous foci. Nevertheless, from a practical standpoint in a children's hospital treating large numbers of acutely ill children, the hospital stay of the child may be the only time the child is available for testing. When dealing with families of low educational level and intelligence, it is better to test during the hospital stay than not to test at all, as may occur if they fail to return the child to the clinic.

FOLLOW-UP OF POSITIVE TUBERCULIN TEST

A positive tuberculin test in a child is the crossroads of a clinical investigation which leads, on the one hand, to a search for the source of tuberculosis in the immediate environment, and, on the other hand, to a study of the child himself, with reference to location of the lesion, its extent, and the degree of activity. The fact that the child with the positive test seems normal makes no difference at all with regard to the carefulness of the follow-up. It is well known that primary tuberculosis may be present without clinical evidence other than a positive tuberculin test.

A. Family Follow-Up. In private practice, especially, but in clinic work as well, one should carefully prepare the parents for the follow-up before the test is actually applied. During the first year of life, when the usual immunizations are being carried out, it is an easy matter to tell the mother that a routine tuberculin patch test or intradermal test is indicated at the time of the Schick test, which usually comes between 12 and 18 months of age. At the time the test is to be applied, apprehension will be prevented by a few words to the effect that the test is simply a routine procedure, that tuberculosis is not suspected, but that if the test should turn out to be positive it will be necessary to obtain chest x-ray films of the child, and of all adult members of the family and servants, and to apply tuberculin tests to the other children. Also a statement that if the test is positive it does not necessarily indicate a severe infection will do much to allay worry. To tell the mother these things after the test is shown to be positive is much less effective. In private practice cases, it is extremely rare to encounter a mother who does not wish to have her child tested, or a family that does not cooperate in the follow-up. Where the mother has not been properly prepared for the meaning of a positive test and the follow-up indicated, one may find great apprehension and a reluctance to go through with the family survey.

One of the mistakes often made in surveying the family of the positive reactor is to take the easy way out by depending on a brief history and physical examination of adults in the household to tell whether tu-

berculosis is present or not. It seems superfluous to point out that a chest x-ray film is practically indispensable in the diagnosis of minimal or slightly advanced pulmonary lesions. The decision as to whether or not an adult in the family group has a tuberculous lesion is altogether too important from the standpoint of future safety of the positively reacting child to allow of anything but the most careful family survey.

The general practitioner has the best chance to obtain a careful follow-up. In his role of physician for the whole family, it is easy for him to obtain the necessary information about all members of the household. From the pediatrician's standpoint, one must work with the physician who treats the adult members of the family. If this physician is aware of the implications of a positive tuberculin test in the child and the necessity to insure an environment free from tuberculous individuals, cooperation in the matter of surveying the adults will be facilitated. If, on the other hand, he believes that much ado is being made about nothing, the opportunity to survey the family will be impeded. Because of a few experiences of this sort, it has been my policy to obtain chest roentgenograms on all adult members of the household before sending the adults to their own physicians for further study, if indicated.

Whatever the obstacles may be, no physician has discharged his moral obligation to the tuberculin-positive child until he has taken every step to assure an environment free from tuberculous foci, for it is frequently by continued association with a tuberculous individual that the serious reinfection form of the disease, with all its grave potentialities, ensues.

If, in the study of the family, an individual with tuberculosis in a communicable stage is detected, the indication to break the contact between the child and the adult is clear and impelling. In many cases, the contact can be broken easily, or has already been broken by recent death of the tuberculous adult. In the South, negro servants constitute a special problem, especially in view of the fact that normal chest x-ray films are not required for health certificates in most communities. In these days of easy access to roentgenography the physician should advise the family to have an x-ray film made of the servant's chest to rule out tuberculosis before employment. In our community this is easily obtainable, and the families are most cooperative. If the servant happens to be the one with the communicable lesion, her discharge from service and her subsequent treatment are arranged. The main problem in breaking contacts arises when the mother or father has the disease. Each case must be handled individually, and a further discussion of the steps to be taken is beyond the scope of this paper. However, it is apparent that nothing short of a complete break of contact between child and tuberculous adult is warranted.

B. Follow-Up of the Child. In the further study of the child with the positive tuberculin test one seeks evidence as to the location of the disease process, its extent, whether or not the process is clinically active, and especially whether or not the child is in a communicable stage of the disease.

A careful history, physical examination, and chest roentgenogram will usually be completely negative, for a positive tuberculin test in a child usually indicates a primary tuberculous lesion in the chest which is not now producing symptoms, abnormal physical findings, or x-ray evidence. The majority of all children who react positively to the tuberculin test have negative chest roentgenograms. This is so because the lesion may be very small, may be located back of the heart shadow, may be in the lower portions of the lungs and hidden by the liver shadow, may be obscured by the mediastinal shadows, or may be invisible on ordinary posterior-anterior films for some other reason.

Not all primary tuberculous involvements are mild. In a small but highly important percentage of cases more extensive involvement is present. Symptoms are usually indefinite, but in the clinically active cases may include fever, usually lowgrade, failure to gain weight, afternoon fatigue and irritability. Cough is an uncommon symptom. It is especially important to realize that expectoration, hemoptysis, and night sweats are practically nonexistent in primary tuberculosis in children. Marked weight loss is a great rarity. Abnormal physical findings are usually not present even when rather extensive parenchymal lesions are noted on the chest roentgenogram. However, in more advanced cases one may encounter decreased breath sounds, dullness to percussion, rales, and, at times, evidences of obstructive emphysema or of atelectasis, sometimes followed by bronchiectasis.[7]

A detailed description of the roentgenographic findings in primary tuberculosis of the lungs is beyond the scope of this presentation. Suffice to say, the evidence may range

from none at all to that of very extensive involvement, such as miliary tuberculosis. Even cavitation may be present in the progressive primary complex described by Auerbach.[8] The usual evidence consists of a parenchymal shadow and an associated enlargement of the neighboring tracheobronchial lymph nodes, with or without a thin streak of a shadow connecting the two and representing the pulmonary lymphangitis which is part of the primary complex of Ranke. As is well known, either the parenchymal of lymph node shadows may become calcified, or fibrosed. The chief difficulty in interpreting chest films arises when there is an apparently slight or moderate enlargement of the hilar shadows. In this connection, it is well to remember that most of the hilar shadow is caused by large pulmonary vessels, that there is considerable normal variation noted in hilar shadows, and that there are many pulmonary conditions other than tuberculosis which may produce enlargement of tracheobronchial lymph nodes.

There has been an increasing recognition of the fact that pulmonary calcifications are by no means tantamount to a diagnosis of tuberculosis. The work of Christie and Peterson[9 10 11] and of others indicates that a benign form of histoplasmosis may account for many of the pulmonary calcifications encountered in the central area of the United States, ranging from the western slope of the Allegheny Mountains to as far west as Kansas City. Coccidiodomycosis and other fungus infections of the lungs in other parts of the country may also produce pulmonary calcifications. This important work on histoplasmosis calls for a new orientation with regard to the interpretation of chest roentgenograms of children found to have pulmonary calcifications, with or without positive tuberculin tests. From a practical viewpoint, it is no longer possible to assume that a child who has a positive tuberculin test, and whose chest film shows evidence of calcification, necessarily has a calcified tuberculous lesion. The calcification may be due to healed histoplasmosis and the tuberculous involvement may be active and not visible, or may be responsible for only a portion of the calcifications, or may be in some other part of the body. Of more significance is the evidence that pulmonary calcifications in a child with a negative, properly performed tuberculin test are probably not due to tuberculosis. At the John Gaston Children's Hospital we have worked with Christie's histoplasmin testing material and have been impressed with the cases encountered in whom pulmonary calcifications were noted in the presence of a positive histoplasmin test and in the absence of a positive tuberculin test. The histoplasmin test is performed intradermally in the manner of the intradermal tuberculin test, with the reaction being read at 72 hours.

In addition to the history, physical examination, and chest roentgenogram, certain laboratory evidence may be used to determine whether the disease is active, or not, and whether the disease is in a communicable phase. An increased sedimentation rate is regarded as evidence of continued activity, provided other causes for an increase in the rate are excluded. An increase in the monocyte-lymphocyte ratio is also considered evidence of activity. The best criterion of activity is continued lowgrade fever. In this connection, one should remember that temperatures should be taken after the child has rested a half hour after any exertion. Sometimes children are alleged to have lowgrade fevers for months when, in reality, the temperature recordings are made so soon after exercise that they are normally elevated. This is more often the case with children suspected of having rheumatic fever or undulant fever, but the same is true to a less extent of children thought to have an active primary tuberculous infection.

From a practical point, it is important to know whether the tuberculin-positive child can spread his disease to others. The absence of any symptoms or abnormal physical findings, and the presence of a chest x-ray film which either shows no abnormalities or shows evidence of small healed lesions, point toward the child not being a source of infection to others. The presence or absence of a cough is a most important point to determine. If the child has a cough, and especially if he has a demonstrable lesion which appears not to have healed, search should be made for the tubercle bacilli in the gastric washings. If there is no cough, and if no lesion is demonstrable in the lung fields, there is much less indication to obtain gastric washings for study. For my own part, I do not advise lavage of the stomach and study for bacilli in children who react positively to the tuberculin test, but who have no cough and no demonstrable pulmonary lesion which gives x-ray evidence of activity.

The method of gastric lavage and examination of washings does not differ from that used for tuberculous adult patients. For three consecutive days before breakfast the stom-

ach is lavaged. The washings are concentrated. The usual acid-fast stain of a smear of the washings is made and search instituted microscopically for the bacilli. In addition, material is inoculated on any media suitable for growth of the organism. Injection of guinea pigs is performed in some cases, but reliance on cultures is gradually superseding the practice of animal inoculation.

If tubercle bacilli are recovered from the gastric washings, and particularly if the child also has a cough, he should be segregated from playmates until he is free of bacilli in the washings.

TREATMENT OF PRIMARY PULMONARY TUBERCULOSIS

The great majority of children found to react positively to the tuberculin test require no treatment other than to insure an environment free from tuberculous foci, yearly x-ray films of the chest to detect as early as possible any flare-up in the process, or appearance of a reinfection type of lesion, good nutrition, prevention of chronic fatigue, and avoidance of intercurrent infection. Yearly x-ray films of the chest do not usually show significant lesions prior to 10 or 12 years of age,[2] after which time reinfection lesions of the apices become more and more frequent. If yearly films cannot be obtained in early childhood, they should certainly be obtained beginning at 10 to 12 years of age. They have usually had their infection at some time in the past and have it well under control. A small percentage of positive reactors have active lung lesions when seen, and an even smaller but highly important group have severe pulmonary involvement. Patients requiring treatment for primary pulmonary tuberculosis may have extensive parenchymal infiltrative lesions; large lesions in the tracheobronchial lymph glands; a progressive primary focus of Auerbach with necrosis and cavitation; bronchial tuberculosis with obstructive emphysema, atelectasis, and even bronchiectasis; caseous bronchopneumonia; or miliary tuberculosis. Various combinations of the above lesions may occur.

The keynote to treatment is prolonged bedrest until all evidence of activity has ceased, as shown by return of temperature to normal, return of the white blood cell count to normal, return of the monocyte-lymphocyte ratio to normal, a normal sedimentation rate, gain in weight, feeling of increased well-being, absence of any symptoms such as cough, and evidence by serial chest roentgenograms that healing is taking place. In the more severe cases symptomatic therapy is indicated for dehydration, malnutrition, fever, cough, and, in rare cases, cyanosis.

A ray of hope in treatment is the use of streptomycin over long periods of time in relatively large doses, with the realization that failure is frequent when lesions are extensive[12] but that benefit may be obtained when the degree of involvement is less severe.[13] It is as yet too early to evaluate the use of streptomycin in primary pulmonary tuberculosis in children.

After clinical evidence of activity has disappeared, the health of the child should be so supervised that all factors thought to predispose to reactivation of the lesion will be prevented. Special attention should be directed toward the avoidance of malnutrition, fatigue, and intercurrent infections of various sorts. A well-nourished child, given adequate sleep and rest, whose hygiene is kept at as high a level as possible, and who is in an environment free from tuberculous contact has the best chance for continued recovery. The emotional aspects of the child's chronic illness should receive consideration, and all efforts should be made during the period of sickness and afterwards to prevent personality disturbances which are so often part and parcel of any long drawn-out illness.

In addition to the steps mentioned, chest x-ray examinations should be made every few months while the lesions are healing, and at least yearly thereafter. The period from prepuberty through puberty is an especially dangerous one, and yearly chest films may give first evidence of a reinfection type of tuberculosis in a child who until then had kept his disease well in check. The value of serial chest films in detecting early reinfection type lesions lies in the fact that treatment can then be instituted before clinical symptoms and signs are evident.

SUMMARY AND CONCLUSIONS

1. Tuberculosis is a preventable disease which has a declining incidence but still exacts a toll of far too many lives.

2. Primary pulmonary tuberculosis in children differs greatly in its clinical manifestations from the more widely understood reinfection type of tuberculosis in adults and older children.

3. Since clinical symptoms are often lacking, physical findings usually normal, and chest x-ray films frequently negative, the chief screening agent available to determine

which children have been infected and which have not is the tuberculin test. This test should be applied to all children, beginning at about 18 months to two years of age, and should be repeated every two or three years if negative.

4. Types of tuberculin tests recommended and the meanings of positive and negative tuberculin tests are discussed.

5. A positive tuberculin test in a child requires a follow-up in the family group to determine whether or not a tuberculous focus exists in a member of the family, and necessitates study of the child from the standpoint of location and extent of the lesion and degree of activity, with special reference as to whether the child can spread the disease to others.

6. For tuberculin-positive children without clinical evidence of the disease, or with x-ray evidence of healed lesions, treatment involves breaking any contact that exists between the child and tuberculous adult, supervision of the health of the child so as to avoid malnutrition, fatigue, and intercurrent infection, and yearly chest roentgenograms with a view toward picking up any reinfection type lesion at an early stage when treatment will be most effective. This is especially true in the prepuberty and puberty periods.

7. When clinical activity exists, treatment consists essentially of bedrest, proper nutrition, avoidance of tuberculous contact, symptomatic treatment as required by manifestations of the disease process, and, possibly in certain cases, the use of streptomycin. The role of streptomycin in primary pulmonary tuberculosis is not yet clarified, but the drug holds some promise for cases with less extensive lesions. After clinical activity has ceased, the same health supervision is given as has just been discussed for the tuberculin-positive child without clinical activity. Serial chest roentgenograms are of special significance in these cases.

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CONGENITAL HEART DISEASE*

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In the field of cardiology, where ordinarily our diagnostic accuracy is quite high, congenital heart disease has been in the past a rather conspicuous exception. There have been a number of reasons for this: First, the incidence of the disease is fairly low, so that in the normal course of practice, no individual would derive any extensive experience; second, there was a great profusion of lesions and apparently unpredictable combinations; third, there was no definite treatment and, therefore, the need for an exact diagnosis was not too apparent. Modern interest in congenital heart disease definitely stems from the work of Maude Abbott[1] who accumulated and analyzed a series of one thousand cases which came to necropsy. The present great interest in this subject is, of course, due to the application of surgical treatment to certain cases, principally by Gross[4] of Boston, and Blalock[2] of Baltimore. This paper will concern itself with the diagnosis of those cases of congenital heart disease which are amenable to surgical treatment. These conditions are: The Tetralogy of Fallot, Patent Ductus Arteriosus, Coarctation of the Aorta, Double Aortic Arch, and an Anomalous Right Subclavian.

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TETRALOGY OF FALLOT

The tetralogy consists of the following features: Pulmonary stenosis, or atresia,

patent interventricular septum, a dextraposed, or overriding aorta, and right ventricular hypertrophy. This is a rather common form of congenital heart disease occurring 110 times in Maude Abbott's series of 1000 cases. Eighty-five of these cases showed stenosis, while 25 showed atresia. The average age at death in her series was 12¾ years with a maximum attained age of 24 years. There are rare exceptions, however, to this maximum age. Paul White reported a rather famous American musician who died at the age of 59 years and nine months.

The most significant feature of the tetralogy is the pulmonary stenosis, inasmuch as this prevents an adequate amount of blood from passing through the pulmonary circulation. The tetralogy is the typical "blue baby" with cyanosis, often intense, clubbing of the fingers, and polycythemia. The oxygen capacity of the blood is high. The actual oxygen content and the per cent saturation are, of course, very low. The red count, hemoglobin, and hematocrit readings are all elevated, and at times quite markedly so. Clinically these patients are cyanotic, show clubbing of the fingers and toes, the heart is ordinarily not enlarged, but either systolic or diastolic murmurs, or both, may be heard. The x-ray appearance may be characteristic. It has been described at the coeur en sabot or the "wooden shoe" heart. This is due to the right ventricular hypertrophy which causes the heart to assume a horizontal position with a bifid apex, usually giving it a blunt appearance. The waist is narrow, the aortic knok prominent. The left oblique view, hypertrophy of the right ventricle may be noted. The lung fields show increased translucency due to the defective pulmonary circulation. The narrow waist is due to an absence or diminution of the pulmonary artery shadow. The pulmonary window as seen in the right oblique may be abnormally clear. The electrocardiogram as a rule is not very helpful. It tends to show evidence of right ventricular strain and may show an A-V block.

The surgical treatment of this condition was first reported by Blalock and Taussig[2] in 1945. At this time they reported three cases in which they had anastamosed the innominate artery to the pulmonary artery. This idea was suggested to them because of the fact that in complete pulmonary atresia the occurrence of death was governed largely by the time at which closure of the ductus arteriosus occurred.

The operative procedure is, of course, essentially the production of an artificial ductus. Since then they have found that the right subclavian artery is somewhat more satisfactory and at operation the end of the right subclavian artery is anastamosed to the side of the pulmonary artery.

Following operation the oxygen content of the blood rises at the same time that the oxygen capacity falls. There is a concomitant fall in red count, hemoglobin, and hematocrit. Shortly after operation there is usually slight evidence of enlargement of the heart to the left, as well as evidence of a definite increase in the pulmonary vascular markings. This enlargement of the heart to the left, however, is not progressive. Most of the patients after the operation are not cyanotic; their percentage of oxygen saturation usually rises to about 75 to 85 per cent. This compares with the normal of about 94 per cent. The changes in the laboratory findings are, of course, associated with corresponding improvement in the patient's subjective condition and in the ability of the individual to perform work.

PATENT DUCTUS ARTERIOSUS

Following birth the ductus arteriosus normally becomes obliterated at the age of approximately three weeks. Failure of this process to occur results in a persistent patent ductus arteriosus. Taken either alone or in association with other congenital cardiac defects, it was present in approximately 25 per cent of Maude Abbott's series. It is frequently associated with serious defects which cause early death. Its persistence in association with the tetralogy of Fallot is a favorable factor and has allowed some of these patients to reach a relatively advanced age. Its interruption here would, of course, be definitely contraindicated.

In its pure form it is a relatively innocuous lesion. The greatest danger is the occurrence of subacute bacterial endocarditis. There may also be retardation of growth and, in long-standing cases, left ventricular failure may ensue. These patients are not cyanotic and they are often picked up incidentally in a general physical examination.

The most characteristic physical finding is a loud, continuous, machinery-like murmur with systolic accentuation, frequently associated with a systolic thrill, and at times a diastolic thrill, heard best in the second interspace to the left of the sternum. The pulmonary second sound is accentuated. There is a tendency to have a normal or low

systolic blood pressure with a low diastolic pressure, giving a slight widening of the pulse pressure. In infants the murmur may be less characteristic or entirely absent.

Fluoroscopically one finds a prominence of the pulmonary conus, active pulsations of the aorta, the left ventricle, and the pulmonary artery with the so-called "hilar dance," and depending upon the age, left ventricular enlargement.

The surgical treatment was introduced in 1938 by Gross, of Boston, who first ligated the ductus arteriosus. However, with this procedure recanalization was fairly frequent, and at the present time he does a double ligation and severs the vessel between the ligatures. These patients become completely normal and the mortality has been very low.

Shapiro[5] has collected 643 cases which have been operated upon by 46 different surgeons, and found that the diagnosis was correct in 626. He found that the mortality rate in uninfected cases operated on by this group of 46 different surgeons was 4.9 per cent. He states, furthermore, that three surgeons, Gross, Wangensteen, and Crafoord, have performed the operation on 172 uninfected patients without a single mortality.

COARCTATION OF THE AORTA

Coarctation of the aorta is a stricture which arises at the site of the ductus arteriosus and is apparently an extension of the fibrosing and obliterating process which occurs normally in the ductus following birth. This is known as the adult type of coarctation and is the type with which we are concerned here. The infantile type is a more extensive atresia-like process which usually causes death at an early age and is not amenable to surgery.

This disease is not common, occurring about once in 3,000 or 4,000 autopsies. It is four or five times as common in males as in females. The average age at death is about 35 years; however, the extremes have been reported from six months to 92 years.

Causes of death are rupture of the aorta, intracranial hemorrhage, subacute bacterial endocarditis, and congestive heart failure. These four conditions constituted 74 per cent of the causes of death in a series collected by Reifenstein, Levine, and Gross.[6]

When subacute bacterial endocarditis occurs, it usually develops on bicuspid aortic cusps.

The occurrence of congestive failure is almost invariably associated with other cardiovascular abnormalities. These may be either congenital or acquired.

Intracranial hemorrhage is due to a subarachnoid hemorrhage from rupture of a congenital aneurysm ordinarily near the circle of Willis.

Other pathological findings at death are an almost constant left ventricular hypertrophy and bicuspid aortic valves in 23 to 40 per cent of all cases. This condition is probably the most easily and the most accurately diagnosable of all congenital heart abnormalities. A systolic murmur is always present. This is usually heard over the precordium, especially at the base. Frequently it is also heard in the back between the scapulae, or lower. The murmur is usually moderate to loud in intensity anteriorly, rarely it may be louder over the back than over the front. Because of the location of the aortic obstruction, one finds a hypertension in the upper extremities associated with a hypotension in the lower extremities. The femoral, dorsalis pedis, and posterior tibial pulsations are usually absent, and these should always be examined in cases of hypertension, especially hypertension in young individuals. An extensive collateral circulation springs up which, because it includes the intercostal arteries, gives rise to another very important diagnostic sign. This consists of a wavy erosion of the inferior surfaces of the ribs, which can easily be seen by x-ray. This is a very valuable confirmatory sign; however, it may be absent in children because the disease has not been of sufficiently long duration to produce the erosion.

Other significant roentgenological findings are dilation of the ascending aorta, absence or diminution in size of the aortic knob, left ventricular enlargement, and lack of a prominent descending aorta. The small or absent aortic knob may be a very suggestive point, inasmuch as one usually expects to find a prominent knob with hypertension.

In the surgical treatment of coarctation of the aorta, the aorta is clamped off, the constricted segment excised, and then the ends of the aorta are joined together in an end-to-end anastamosis. The clamp is then released gradually until the normal circulation is reestablished. This procedure is highly successful, carries with it a very low mortality, and results in a complete cure for the patient.

DOUBLE AORTIC ARCH

This syndrome consists of a vascular ring constricting the trachea and the esophagus

due to the failure of normal involution of the embryonic fourth right aortic arch. It was first described by von Siebold in 1837. It is characterized by cough, dyspnea, stridor, frequent upper respiratory infections, regurgitation of food, and loss of weight. Symptoms may be present from birth, but more characteristically appear after a few weeks. The most distinctive symptom appears to be an increase in the severity of the respiratory symptoms while the infant is feeding. This syndrome is probably the cause of the symptoms in some cases which, in the past, have been attributed to an enlarged thymus. There are no objective physical findings other than the symptoms just described.

Diagnosis is made by roentgenological examination.[7,8] With barium in the esophagus a constriction may be seen which envolves both diameters. Similarly, with either a plain film or with lipiodol in the trachea, a constriction of the trachea may be seen in both the lateral and anteroposterior diameters. Both aortic arches are functional. The abnormally persistent posterior arch is usually the smaller and surgical treatment is directed at its excision. Occasionally the normal anterior arch is small and the abnormal posterior arch large. In such cases the anterior arch is removed. Again the operative mortality is low and the results are excellent.

ANOMALOUS RIGHT SUBCLAVIAN

Occasionally the right subclavian artery arises as the last vessel from the normal left aortic arch, crosses the mid-line usually behind, but occasionally in front of the esophagus, and ascends obliquely upward and to the right. When its presence produces symptoms, these result from pressure on the esophagus with dysphagia, regurgitation of food, and so forth.

Here again, the diagnosis is made entirely by x-ray[8] and shows an oblique defect on the posterior surface of the barium filled esophagus just above the level of the aortic arch.

Surgical treatment consists of the excision of the offending artery. It is interesting to note that neither here, nor in the treatment of the tetralogy of Fallot, where again the circulation through the right subclavian artery is cut off, does any serious harm to the right arm follow.

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CLINICAL PATHOLOGIC CONFERENCE

University of Oklahoma School of Medicine

Presented by the Departments of Pathology and Surgery

BELA HALPERT, M.D. AND CHARLES M. O'LEARY, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HALPERT: In a patient with cancer, who has widespread metastases, it may be difficult to determine the site of origin of the growth. This is true clinically and, occasionally, it is true at necropsy. Histologic characteristics are usually helpful, but only

occasionally are they pathognomonic of a specific site of origin. The case we are presenting today illustrates such a situation. We are fortunate in having Dr. O'Leary with us who will analyze the clinical data.

PROTOCOL

Patient: N. L., white female, age 65, admitted January 9, 1947; died February 19, 1947.

Chief Complaint: Pain in back and abdomen; swelling of abdomen.

Present Illness: The patient was apparently well until about one year before admission when she began to have epigastric distress soon after meals. This was associated with pain and tenderness in the right upper abdominal quadrant, occasionally radiating to the right shoulder. She was often nauseated and vomited occasionally. There was some anorexia and dysphagia. These symptoms persisted, but did not increase in severity. In July, 1946, she noticed pain in the right costovertebral region which radiated into the right flank and epigastrium. One month later, a similar pain occurred on the left side. Soon thereafter, swelling of the abdomen first became evident and this gradually increased up to the time of admission. Generalized abdominal aching was a frequent complaint and was usually relieved by defecation. No abnormalities of the stool were noted. The patient believed she had lost six pounds during the course of her illness. She was seen in the Outpatient Department on December 30, 1946, and admitted to the University Hospital on January 9, 1947.

Past History: Not contributory.

Systemic History: Some dyspnea on exertion had been present for one year. The urine was thought to be pink-red occasionally during the past year. No vaginal discharge or bleeding had occurred since the menopause at the age of 45 years.

Physical Examination: On admission, the patient was emaciated, appeared chronically ill and older than her stated age. There was some evidence of dehydration. The superficial lymph nodes were not palpably enlarged. The eyes were sunken. The tongue was very red. The heart and lungs were negative. The abdomen was dome-shaped with flaring of the flanks. There was resonance to percussion over the dome with dullness in the flanks; this shifted with movement. A fluid wave was present. The bowel sounds were present but diminished. There was bilateral costovertebral angle tenderness. The superficial abdominal veins were dilated. Rectal examination revealed small, hard nodules posterior to the uterus. The cervix uteri was normal. Some atrophic changes were noted in the vagina. The pelvic organs were said to be "frozen." No definite masses were palpable.

Laboratory Data: On admission, urinalysis revealed a trace of albumin, occasional red blood cells and 9-12 white blood cells per high power field. R.B.C.'s numbered 3,950,000/cu.mm. with 12 Gm. hb. W.B.C.'s numbered 7,400 with 69 per cent neutrophils, 4 per cent eosinophils, 2 per cent basophils, 20 per cent lymphocytes, and 5 per cent monocytes. On January 10, 1947, the blood NPN was 47 mgm. per cent and the blood sugar was 114 mgm. per cent. On January 22, 1947, a glucose tolerance curve revealed a level of 114 mgm. per cent at the end of two hours. On January 17, 1947, plasma proteins measured 4.75 Gm. per cent with an albumin globulin ratio of 3.3/1.45. On January 30, 1947, the icteric index was eight. A bromsulfalein liver function test revealed 100 per cent retention at the end of five minutes and 15 per cent retention after 30 minutes. The cephalin flocculation test was reported as negative after 24 hours and 3+ after 48 hours. The thymol turbidity test was negative after 30 minutes and 18 hours. No occult blood was found in the stool. The Mazzini test of the blood was negative.

Clinical Course: Diagnostic studies included numerous roentgenograms. The chest was negative except for a calcified tuberculous complex in the right lung base. A G.I. series revealed no abdominal findings. Barium enemas revealed a persistent narrowing of the distal portion of the transverse colon. It could not be determined whether the cause of this narrowing was extrinsic or intrinsic. A gallbladder series revealed no filling and no opaque calculi. Pyelograms revealed a moderate degree of hydronephrosis on the right. On January 16, 1947, a peritoneoscopic examination revealed considerable free fluid. The parietal and visceral layers of the peritoneum were smooth and no nodules were seen. The liver was nodular in appearance with apparent areas of scar formation. The gallbladder, pancreas, spleen, and pelvic organs were not visualized. The ascending and right transverse portions of the colon were distended, and there was a bulging of the omentum in the left upper quadrant. On February 5, 1947, the peritoneal fluid had a specific gravity of 1.016 and contained over 400 mgm. per cent of protein. On two oc-

casions, the peritoneal fluid contained what appeared to be neoplastic cells. The patient's course was one of steady decline and she died on February 19, 1947.

CLINICAL DIAGNOSIS

DR. O'LEARY: When I first studied the case history which you have before you, I arrived at some rather definite conclusions. Upon further study of the case, these were gradually eliminated one by one until now practically nothing is left. If we consider, in order, the signs and symptoms which this patient presented, perhaps we will be able to make some clinico-pathologic correlation however. It is evident that this patient was ill for a period of from 12 to 13 months and it may be significant that during this time she suffered very little weight loss. It is also evident that she had ascites, and when we consider her story very carefully it appears that this ascites may have antedated the onset of her symptoms. The symptoms that she gave are not definitive of any organic lesions of the gastrointestinal system. One would ascribe them to some type of extrinsic pressure on the gastrointestinal tract. Perhaps this would be an effect of direct pressure on the stomach and small bowel. It is possible that this could be on a vascular basis. There must be considered also certain types of neurogenic disorders as are exemplified by "irritable bowel," pylorospasm, psychoneurosis, etc. At any rate, approximately three months after her major symptoms of pain began, she noticed enlargement of the abdomen, and this progressed until her admission to the hospital on January 9, 1947. We have now definite objective evidence of some rather serious disease. We know that she had ascites over a long period of time and that this developed very slowly. From an analysis of the ascitic fluid, we are inclined to consider this a transudate rather than an exudate because of the low protein and the relative low specific gravity of 1.016. This in itself is good evidence against an inflammatory basis, but there still remain several intraperitoneal causes of ascites, notably cirrhosis of the liver or some extrahepatic obstruction of the portal venous system. The presence of very prominent abdominal veins, as indicated in the history, would support a consideration of portal hypertension. The laboratory report of neoplastic cells within the peritoneal fluid is very important information and indicates that the patient had a malignancy, most likely primary somewhere within the peritoneal cavity. Peritoneoscopic examination revealed no evidence of tumor implants on either the parietal or visceral peritoneum.

With these findings of ascites and neoplastic cells in the peritoneal fluid, we might speculate as to the most probable site of malignancy in a woman of this age. We are told that barium enemas revealed a constant filling defect in the transverse colon and that it could not be determined whether this was extrinsic or intrinsic. In *carcinoma of the transverse colon*, the diagnosis is usually made late because obstruction does not occur until late in the course, nor is bleeding usually a prominent symptom. We must then consider carcinoma of the transverse colon, especially of the distal segment or the hepatic flexure. Would this give rise to ascites in the absence of peritoneal implants? We know that ascites becomes clinically evident only after 1500 to 2000 cc. of fluid have accumulated in the peritoneal cavity, so that in a case such as this, a great deal of fluid must have been present. In the absence of peritoneal carcinomatosis, it would be unlikely that carcinoma of the transverse colon would cause such ascites. If it produced marked retroperitoneal involvement or otherwise led to obstruction of the portal vein, such a phenomenon could be explained; this seems quite unlikely because of the site of primary involvement. This patient was carefully investigated from many aspects and we are impressed by some of the data which relate to hepatic function. The icteric index was eight, the bromsulfalein test was 100 per cent retention at the end of five minutes and 15 per cent retention after 30 minutes. The cephalin flocculation test was negative after 24 hours and 3+ after 48 hours. The thymol turbidity test was negative after 30 minutes and 18 hours. These would indicate to me that hepatocellular damage had occurred, but not to a marked degree and not sufficient to explain this much ascites. Nevertheless, it is evident that some hepatic changes are present. Upon peritoneoscopy, the liver was observed to be nodular and scarred. This suggests specifically *portal cirrhosis*. In this disease, the hepatic function tests previously mentioned might be expected to yield values similar to those observed in this case and thus are consistent with this diagnosis. *Parametrial malignancy* was considered, but is not too common at this age. The finding of a "frozen pelvis" in conjunction with small, hard nodules posterior to the uterus suggested secondary implantation rather than unilateral primary involvement. The peritoneo-

scopic examination failed to mention any findings in the pelvis and unfortunately the peritoneoscopist could not tell us very much about the left upper quadrant. In summary it is my feeling that this patient may have had cirrhosis with ascites secondary to the cirrhosis. I believe that she did have a malignant neoplasm which could have been primary in the transverse colon, but which probably was not. As to the primary source, I do not know.

ANATOMIC DIAGNOSIS

DR. HALPERT: At the completion of the postmortem examination our opinion was similar to that of Dr. O'Leary's — we didn't know the primary site of origin of this neoplasm either. The body was markedly emaciated and the abdomen was distended with fluid. In addition there was pitting, on pressure, of the lower extremities and lower portion of the trunk. The peritoneal cavity contained approximately 3500 cc. of straw-colored slightly turbid fluid. Both the parietal and visceral peritoneal surfaces were uniformly opaque, dull, and presented an appearance suggestive of sugar coating. This diffuse coating was obviously composed of neoplastic tissue and measured up to 0.3 cm. in thickness. The greater omentum was diffusely infiltrated by neoplastic tissue and was indurated and shortened. Occasional loops of small intestine were matted together by this neoplastic coating and were focally adherent to the parietal peritoneum. The "frozen pelvis" described clinically was a result of peritoneal carcinomatosis and fusion of the pelvic structures to each other. In this case I believe that a rectal shelf should have been palpable because of the marked thickening and induration, by neoplastic involvement, which had occurred. There was no evidence of portal hypertension or of primary inflammatory disease that might have been responsible for ascites. Ascites was a direct effect of this diffuse peritoneal carcinomatosis. Pleural cavities were free of fluid and there was no evidence of neoplastic involvement of the serosa here. The right lung weighed 510 gms., nearly twice the normal, and there was lumpy induration of the posterior portions. Microscopic studies confirmed the diagnosis of bronchopneumonia. The left lung was not involved. The heart exhibited considerable atrophy, weighing only 150 gms. It was not otherwise remarkable. The liver too was decreased in size, 875 gms. There were no discrete metastases — neoplastic involvement was limited to the serosal layer. The gallbladder was somewhat enlarged, though not strikingly so, and contained 35 cc. of milky white liquid with three facetted stones of mixed composition. Enlargement was not so much in the over-all size as in the thickness of the wall which varied from 0.3 cm. to 1.5 cm., being thickest at the fundus. The thickening at the fundus was actually the result of an anomaly, an adenomyoma. There was no obvious ulceration although there was an area of mucosal thickening and roughening. The entire gastrointestinal tract, from the esophagus to the rectum, was carefully examined, but without observing any area of ulceration or proliferation that might suggest a neoplastic process. The pancreas was not remarkable, nor did the kidneys and suprarenal glands show any pertinent changes. At the time of the gross examination a frozen section was made, but this gave little information except that the neoplasm was of columnar cell type. As is frequently the case when clinicians are at a loss for diagnosis, so with us — we took it out on the laboratory, and instead of taking 15 to 20 microscopic sections as is usual, we prepared 40. As a result of this, we finally reached a decision as to the primary site. Histologically, this neoplasm was predominately columnar cell in type and exhibited formation of numerous small tubular or gland-like structures. In addition, however, there were occasional solid nests which suggested pavement type epithelium and some of these cells appeared to have undergone keratinization. With this mixed pattern we considered especially, as primary sites, the uterus and the lungs, since in both instances it is possible to have a mixture of squamous and columnar cell tissue in carcinoma. In the former case the name of adeno-acanthoma is applied. This is a poor name, but euphonic — so we use it. Such a condition has also been described as occurring, rarely, in carcinoma of the stomach. All of these organs were re-examined most carefully, but without evidence of primary neoplastic involvement. To my knowledge no such mixed type of carcinoma has been described as arising in the gallbladder, but I know of no reason why it should not occur there. By sheer luck, in combination with much effort, we found the primary site to be in the gallbladder. This was, in a sense, an occult carcinoma since the site of origin was apparent only histologically. Here, there was neoplastic involvement of the *mucosa* and involvement of all the remaining layers as well. In every other epithelial organ which was involved, the neo-

plasm was limited to the serosal and subserosal layers. Since in these other organs, the mucosa was not involved, they could not have served as the source of origin.

Our final anatomic diagnosis was:

Cholecystitis, chronic, with cholelithiasis (mixed gallstones)

Carcinoma of the gallbladder, columnar cell and squamous cell (adeno-acanthoma) with peritoneal carcinomatosis and ascites

Emaciation and edema of the lower extremities and lower portion of trunk.

Bronchopneumonia, right

Adenomyoma of the fundus of the gallbladder

Tuberculous primary complex in right lung, calcified

Pleural adhesions, fibrous, bilateral

The old question as to whether the presence of gallstones, coincident with chronic inflammation, has anything to do with carcinoma of the gallbladder, arises in this case. In the past I have been of the opinion that the two conditions, when they occur together, are coincidental only. In this case, I believe that the presence of gallstones may have had a carcinogenic influence.

MEET OUR CONTRIBUTORS

Hubert E. Doudna, M.D., F.A.S.A., Oklahoma City, is the author of "The Use of Curare in Anesthesia" appearing in this issue. A graduate of the University of Michigan School of Medicine ('30), he limits his practice to anesthesia. Dr. Doudna is a member of the American Society of Anesthesiologists, the International Anesthesiac Research Society and the Southern Medical Association.

John P. Hackler, M.D., M.P.H., is also a contributor to the October Journal as he wrote "Current Problems in Public Health." He is a graduate of the University of Oklahoma School of Medicine ('33) and received his master of public health degree from Johns Hopkins in 1940. He limits his practice to public health and is a fellow of the American Public Health Association. He is now chairman of the scientific section on public health of the Oklahoma State Medical Association. Dr. Hackler was previously located in Seminole where he was engaged in private practice and at Stillwater where he was associated with public health.

Homer A. Ruprecht, M.D., F.A.C.P., wrote "Congenital Heart Disease" appearing in this issue. He graduated from Western Reserve University in 1928 and limits his practice to cardiology. He is a member of the American College of Physicians, the Southern Medical Association and the American Heart Association. Dr. Ruprecht is a trustee of the Tulsa County Medical Society.

James G. Hughes, M.D., Memphis, Tenn., is the author of "The Eearly Diagnosis and Treatment of Primary Pulmonary Tuberculosis in Children." Dr. Hughes limits his practice to internal medicine.

Presenting the Clinical Pathologic Conference in this month's issue were:

Bela Halpert, M.D., now of the University of Oklahoma School of Medicine and formerly with the pathology and bacteriology departments of Louisiana State University. He limits his practice to pathology and is a member of the following organizations: National Gastroenterological Association, American Association of Anatomists, American Association of Pathologists and Bacteriologists, and the American Society for Experimental Pathology.

Charles M. O'Leary, M.D., is a member of the American College of Surgeons and limits his practice to surgery. He assisted in presenting the Clinical Pathologic Conference.

TECHNOLOGISTS WILL MEET

The Oklahoma Society of Medical Technologists fall seminar will begin in the laboratories of the Tulsa University zoology department Saturday, October 25 at 2 p.m. Sessions are also scheduled for Sunday, October 26.

The tentative program Saturday afternoon includes:

Culture of Intestinal Protozoa. Mary Jane McClintock, bacteriologist, Oklahoma State Health Department.

Cardiolipin Lecithin Antigen Mixture, Mrs. Hazel Suessenguth, Mount Siani Hospital, Cleveland, Ohio.

Panel discussion on serology.

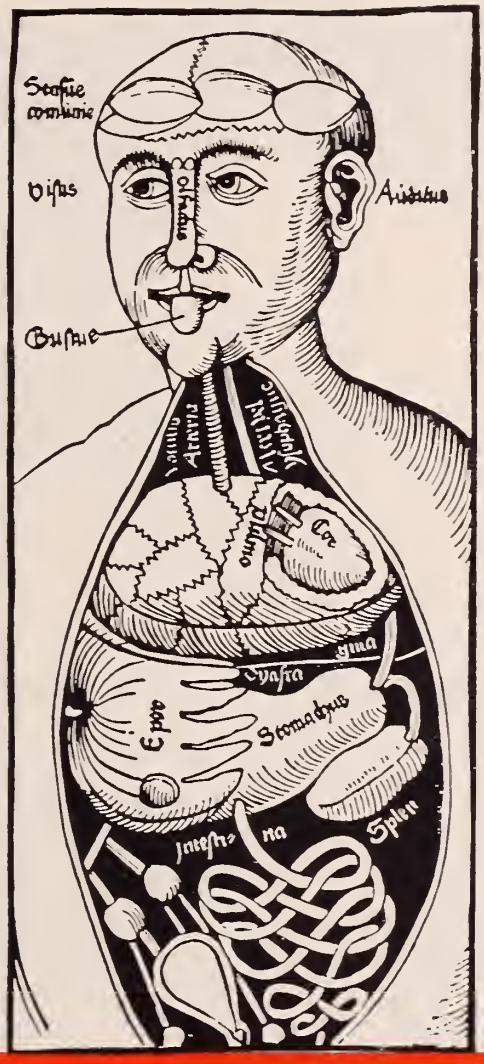
Interpretation of Serologic Tests for Syphilis with notes on non-specific reactions and on quantitative tests will be discussed at the Saturday night dinner meeting by F. R. Hassler, M.D., director of labs, Oklahoma State Health Department. Dr. Hassler has asked that pathologists and practicing physicians attend this meeting because material will be taken from questions frequently asked him by technicians and doctors alike. Premarital Wassermann tests will also be discussed.

Sunday morning the Tulsa Round Table of Medical Technologists will be hosts at a coffe and a business session will follow.

In addition to the above sessions, scientific pictures will be shown and Oklahoma specialists will present papers and material on parasitology and serology.

OBSTETRICS-GYNECOLOGY INDEX AVAILABLE

A cumulative index of the progress in obstetrics and gynecology from January 1, 1940, to date is now available as the Washington Institute of Medicine has recently published the *Obstetrics and Gynecology Index 1940-49*. Compiled in the surgeon general's library, Washington, D.C., by a staff of professional medical indexers, there are more than 19 500 references to articles of obstetric and gynecologic significance which have appeared in the medical and related scientific literature of the world. Annual cumulative supplements will be issued beginning January, 1948.



Anatomic woodcut: Title page from Pyligk Compendium; 1516—Courtesy, The Bettmann Archive

IN 1516:

Anatomic illustrations were crude; knowledge of the anatomy and the treatment of diseases of the heart and thoracic organs were extremely limited.

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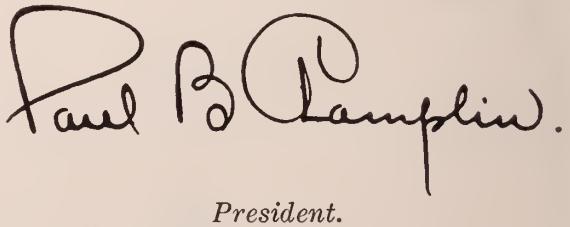
SEARLE RESEARCH IN THE SERVICE OF MEDICINE

President's Page

In every survey that has been made and in every congressional hearing, one of the first questions to be asked of the opponents to socialized medicine is "how many people in your state are covered with insurance for medical and hospital care?" We are very proud of the fact that 190,477 people in Oklahoma are now enrolled in the Blue Cross and 38,766 are enrolled in the Oklahoma Physician's Service. We have no way of accurately knowing how many people are covered through the private insurance carrier and the non-profit plans but the sum total is rising rapidly and if governmental interference is delayed for a reasonable length of time, the American people will voluntarily work out their own needs in this field.

The Blue Cross and Oklahoma Physician's Service is being sponsored by the Oklahoma State Medical Association and many other interested individuals. These being non-profit organizations they cannot employ a large number of salesmen to sell this to the public, therefore it is encumbent on the medical profession in each locality to take an active interest in sponsoring Blue Cross and Oklahoma Physician's Service in their own locality. In one community members who wish to belong to these organizations have their dues added to their gas bill. Other doctors have formed groups of their own. It is the responsibility of the individual physician to see that these organizations are fostered in their own communities and to see that everyone who wishes to join has an opportunity to become a member. If every doctor in the Oklahoma State Medical Association was an active salesman for Blue Cross and the Oklahoma Physician's Service it would be only a short time until the state would be adequately covered and the danger of socialized medicine would be minimized.

Every county medical society should appoint a committee to carry out this program. This is important. Do it now. Should you desire to contact a representative of Blue Cross or Oklahoma Physician's Service, write to either the Executive Office of the Association or Mr. N. D. Helland, 910 South Boston, Tulsa 3, Oklahoma, or First National Bank Building, Oklahoma City 2, Oklahoma.



President.


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ASSOCIATION ACTIVITIES

ASSOCIATION INSURANCE PROGRAM RE-SERVICING UNDERWAY

Accidents aud major and minor illuesses don't mean time off without remuneration for Oklahoma physicians now. Figures revealed by the North American Accident Insurance company show that claims totaling $29,128.96 have been paid to 132 of our physicians since the association sponsored accident and health insurance program begau.

These payments ranged from $5 to $10 for minor illnesses and accidents to well over $2,000 for more serious illnesses and accidents such as operations, pneumonia, and others.

This low cost broad coverage contract is not available on an individual basis and protects members against time loss by accident, illness, accidental death, and loss of a hand, foot, eye, etc.



John McDonald, M.D., chairman of our insurance committee, and Joe H. Jones, Tulsa manager, NAAIC, make plans for the association reservice campaign.

Physicians who desire more information concerning this program or who want to make application for any desired changes such as change of beneficiary will have au opportunity to have all this explained through an intensive reservice campaign now being conducted by the insurauce agency. Field representatives of the company will contact physicians in all counties and members will be notified a few days before the field representative arrives so that insurance conferences can be arranged. This will also be an opportunity for physicians who have returned from service to obtain personal contact with a representative and learn the details of this health and accident (time loss) insurance program.

Members of the Oklahoma State Medical Association insurance committee are: chairman, John McDonald, M.D., Tulsa; Byron Cordonnier, M.D., Enid; and P. K. Groeniug, M.D., Oklahoma City.

This insurance program is underwritten by the North American Accident Insurance company of Chicago, an old line stock company organized in 1886 that has been doing business in Oklahoma siuce 1902. C. W. Cameron with offices at 2305 Apco Tower, Oklahoma City, is the southwestern divisiou manager. Joe H. Jones is the Tulsa manager and is located at 311 National Mutual Building, Tulsa.

DEAN OF MEDICAL SCHOOL ANNOUNCES RESIGNATION

Jacques P. Gray, M.D., has resigned his position as Dean of the University of Oklahoma School of Medicine effective November 15. He will become medical consultant with Parke Davis and Co.

Dr. Gray came to O. U. as Dean in September, 1946, and his contribution to medical education and Oklahoma Medical Research Foundatiou has been outstanding.

Dr. Gray, during the time he was Dean, gave unstintingly of his time in contacting the county medical societies and individual physicians in the interest of the University of Oklahoma School of Medicine and the promotion of the Medical Research Foundation.

Dr. George Cross, President of the Uuiversity of Oklahoma, has indicated that a successor to Dr. Gray will be picked as soon as possible and Dr. Cross has intimated that he will request representatives from the University of Oklahoma Medical School alumni association, the Oklahoma State Medical Association, the Oklahoma Medical Research Foundation, the pre-clinical staff, and the student body to assist him in the selection of the new Dean.

Dr. Gray's resignatiou has pointed up the need for a general revaluation of the needs of the medical school, both from an administrative as well as a financial point of view.

NORTHEAST OKLAHOMA LEADS IN BLUE CROSS, O.P.S.

Northeastern Oklahoma had the highest percentage and southwestern Oklahoma ranked lowest when tabulation was made recently of Blue Cross and Oklahoma Physicians Service participation.

The Tulsa area, including 11 counties in northeast Oklahoma, topped the records of the five other Oklahoma groups. Washington couuty in the Tulsa area had the best representation with 31.6 per cent. Lowest of the northeasteru Oklahoma group is Mayes county with 1.6 per cent participation. Tulsa county itself, with a total popu'ation of 213,200 has 63,828 members of Blue Cross and 14,105 O.P.S. participants, giving it 30.0 per ceut.

The Enid region of 16 counties in northwestern Oklahoma was second with a total per cent of 11.0. In that area, Kingfisher county with a population of 11,804 took the lead with 14.9 per cent. Texas county was lowest with 1.5 per cent of its 9,463 persous.

Eight counties in central Oklahoma make up the Oklahoma City area whose overall total of 8.9 per cent made that region rank third. Cleveland county had the lead in this group with 14.3 per cent participatiou while Oklahoma couuty was second with 9.9 per ceut. Payne county's 1.6 per ceut was lowest.

Other areas participated as follows: 10 couuties in the Muskogee region, 5.0 per cent, population 247,706; 17 couuties iu the Ada group, 4.5 per cent, population, 342,444; and 15 counties in the Hobart area, 3.6 per cent, population, 309,293.

TULSA COUNTY LIBRARY HISTORY TOLD

The library of the Tu'sa County Medical Society is currently observing the 15th anniversary of its formation in 1932. From an obscure beginning as the project of a small group of individual physicians, the library has grown into one of the largest and most complete private medical libraries in the southwest. At present it serves not only the membership of the Tulsa County Medical society but large numbers of doctors in eastern Oklahoma.

The progress of the medical library in its 15 years has been unusually rapid, accentuated in the last seven years by the employment of a trained medical librarian to supervise its operation. During this period the library has more than tripled in the amount of scientific and general medical information and material on file. Space requirements have necessitated constant expansion of the library quarters at 1203 Medical Arts building, Tulsa, and a long range plan of the society looks to the eventual housing of the library in a separate structure.

As early as 1922 the idea of an organized medical library was entertained by the Tulsa County Medical society. The published history of the society records that several ambitious presidents of the society made definite efforts to encourage such a project. It was not until 1932, however, that a small number of individual physicians in the Medical and Dental Arts building formed the Journal Club, each contributing textbooks and periodicals to a common collection. Two years later this nucleous was deeded to the Tulsa County Medical Society and active direction of the project assigued to a medical library committee.

For several years the library suffered from lack of suitable quarters and failure to properly catalog and classify the available material until a trained librarian was employed in 1940.

The rapid growth of the medical library is well illustrated in a study of comparative statistics. In 1940, approximately 2,000 textbooks and periodicals were on hand. Seven years later, the medical library numbers almost 9,000 textbooks and periodicals, over 4,000 repriuts, aud a mass of miscellaneous material. An exteusive collection of rare medical books has been developed, and a splendid sectiou of books of medical history is growing rapidly. In equipmeut, the library uow boasts an attractive reading room, tastefully furnished with an eye towards comfort and serviceability. Display magazine and journal racks, modern library shelving, and useful book cupboards permit material to be kept in ready availability.

This phenomenal growth is due in large measure to the persoual interest of the library's patrons who contribute both in subscription prices and by donation of individual copies to the library. Endowmeut funds, civic and industrial contributions aud other groups also annually make unsolicited coutributions of money, books, and equipmeut.

The library is a member of the Medical Library Association of America and derives much benefit from the exchange service of this association. Last year the library sent more than 50 packages of books and journals to medical libraries of the Philippine Islands which had been ravaged by the Japanese invasion.

Recently, other types of reference material, notably steroscopic views, micro-films, motion pictures, slides, and strip film have been added to the library. Special sections in dentistry aud pharmacology are also being expanded. Increasing attention is being given to material concerning medical economics and medical history. Some of the rare medical books date back to the 17th century and are collectors items.

The library is open daily except Saturday and Sunday and all medical doctors of Oklahoma are cordially invited to visit it at any time. Physicians wishing to enjoy library privileges should write the librarian for regulations pertaining to non-resident physicians.

SOUTHERN MEDICAL ASSOCIATION SESSION TO BE IN BALTIMORE

Upon the invitation of the Baltimore City Medical Society, the annual meeting of the Southern Medical Association will be held there during Thanksgiving week of this year. The last Southern Medical meeting there in 1936 broke all attendance records.

The meeting this year will be concentrated into three days instead of three and one-half. Registration will open Monday morning, November 24, at 8:30 with the program for that day conducted by the local profession. The 21 sections of the Association will hold their meetings ou Tuesday and Wednesday, November 25 and 26. Registration, the majority of the meeting and the scientific and technical exhibits will be found at the Fifth Regiment Armory on Hoffman Street. Other meetings will be conducted at the home of the Medical and Chirugical Facu.ty of Maryland and the Baltimore City Medical Society, 1211 Cathedral Street, two and one-half blocks from the armory.

Hotel reservations should be made through the Hotel Committee, Southern Medical Association Meeting, 1714 O'Sullivau Building, Baltimore 2, Maryland. The hotels will make no reservations directly with physicians, but wi.l take them only from the committee.

The cliuical sessions and the sections for Baltimore will meet as follows:

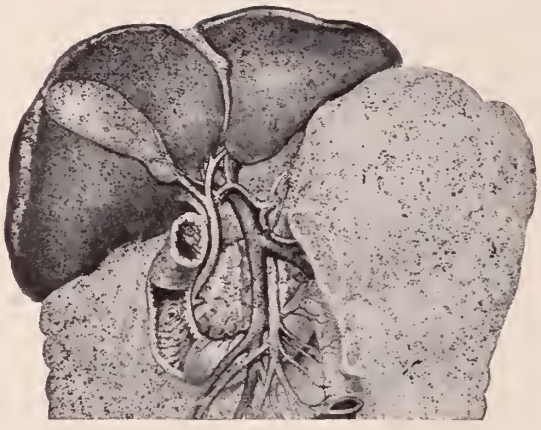
Monday, November 24. *Forenoon and afternoon*—general clinical sessions, Baltimore Day, medicine, surgery, and opthalmology and otolaryngology, presentatious by physicians of Baltimore. A general public session will be held at the Lyric Theater on Monday evening.

Tuesday, November 25. *Forenoon*—Sectiou ou Gastroeuterology, Section on Neurology and Psychiatry, Sectiou on Orthopedic and Traumatic Surgery, Section on Urology, Section on Industrial Medicine and Surgery, and Section on Medical Education. *Afternoon*—Sectiou on Medicine, Section on Ophthalmology and Otolaryngology, Section on Surgery, Section on Obstetrics, Section on Physical Medicine, and Section on Public Health. A general public session featuring the address of the President followed by the President's reception aud ball will be at the Lord Baltimore Hotel ou Tuesday eveniug.

Wednesday, November 26. *Forenoon*—Sectiou ou Pediatrics, Section on Dermatology, Section on Radiology, Section on Gynecology, aud Section ou Anesthesiology. *Afternoon*—Section ou General Practice, Sectiou on Allergy, Section on Pathology, Section on Proctology, aud Section on Ophthalmology and Otolaryngology.

PROGRAM ASSISTANCE GIVEN BY REHABILITATION SERVICE

The Vocatioual Rehabilitation Service has a suggestion for county societies in doubt about what to use for their next program. Those with openiugs on their programs are asked to contact Voyle C. Scurlock, director, 708 Midwest Building, Oklahoma City. A uew film, "Comebock," in technicolor gives the story of rehabilitation and is available for programs.



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WHAT DOES THE PUBLIC THINK?

Following is part two of a Journal summary of "Opinions of the Public and of Physicians," a report compiled by The Opinion Research Corporation of Princeton, N. J., for the Medical Services Foundation, Chicago. The report consists of a nation-wide survery of opinion incorporating information obtained during the period from 1943 to May, 1947.

The deep depression of the Thirties, combined with the promotion of a collectivistic philosophy, by a paternalistic Federal Government — created new problems for the medical profession. In February of 1939, the first National Health Bill was introduced in the Congress by Senator Wagner.

There followed a succession of Wagner-Murray-Dingell Bills. The proposals were truly revolutionary in their intent and method. It was essential for the profession to take steps to safeguard the interests of the public. An urgent need was created that necessitated telling the people of American medicine's principles, methods, and points of view. The National Physicians Committee came into being to aid adequately in meeting this new responsibility.

The extent to which these efforts have been effective is evidenced by the public's awareness of the American Medical Association and record of its activities.

The question was asked, "Have you heard of the American Medical Association?" The answers were:

	1947 Total	Upper Income	Middle Income	Lower Income
Have heard of A.M.A.	74%	92%	83%	61%
Have not	26	8	17	39

Equally impressive is the vote of approval and commendation given by the people. The question was asked of those who knew of the Association, "In general, do you approve or disapprove of the American Medical Association?"

	1947 Total	Upper Income	Middle Income	Lower Income
Approve of A.M.A.	59%	70%	62%	49%
Disapprove	5	7	7	2
No Opinion	36	23	31	49

It should be noted that the vote of the public is practically 12 to 1 in its approval. It can be assumed that this awareness and this overwhelming vote of confidence is traceable to the nature and scope of A. M. A. activities beyond strictly scientific developments.

Evidence of this is provided in the public's growing awareness and attitude toward Socialized Medicine. These questions were asked: "Have you heard of the term Socialized Medicine?" and "Are you for or against Socialized Medicine?" The answers were:

	Have Not Heard	Have Heard	For or Against: For	Against	Don't Know
1943	57%	43%	13%	22%	8%
1947	45	55	13	34	8

In six years, 12% more people are familiar with the term and of each group of 55 people who have heard of Socialized Medicine, 34 are opposed. There is other evidence of equal importance and significance. The question was asked: "Do you think it would be good or bad for the country if the medical profession were controlled by the National Government?" The replies were:

	Good For Country	Bad For Country	No Opinion
1943	24%	61%	15%
1947	23	65	12

Two other questions were asked: "Do you think that under a Government Medical Plan you would be able to call any doctor you want, or do you think it likely that your choice would be limited?" and "Would this be satisfactory to you or not?" The answers were:

	Call Any Doctor	Don't Know	Satisfactory: Choice Limited	Yes	No	Don't Know
1947	19%	15%	66%	9%	54%	3%

The question was asked, "Some say the Government might decide in which city or town a doctor could practice. Would that be good or bad for the public?" The opinions registered were:

	Good	Bad	Qualified	Don't Know
1947	17%	69%	7%	7%

The people were asked: "Some say that under a government plan, doctors might not be allowed to choose what they'd specialize in. How would it seem to you —good, or bad for the people — to have doctors told what they should specialize in?" The answers:

	Good	Bad	Qualified	Don't Know
1947	5%	81%	6%	8%

Sixty-six per cent of the people believe that the doctor should not be told how many patients he can treat. One other instance is provided — the question: "Would you vote for or against the Government's setting the fees doctors can charge for each type of service?" The answers were:

	1943	1947
For Government setting fees	33%	32%
Against	57	59
Don't Know	10	9

An equally remarkable accomplishment is made of record when the public is queried about the National Physicians Committee. At all times the NPC has operated within the policy decisions of the A. M. A. House of Delegates. Always its activities have been directed toward the achievement of objectives previously defined. Its task was that of making clear the meaning and implications of issues. It never sought institutional popularity or credit. The foregoing detailed attitudes of the people and the merely nominal public awareness of the NPC provide evidence of the extent to which these ends have been achieved. Two questions were asked: "Have you heard of the National Physicians Committee for the Extension of Medical Service?" and "In general, do you approve or disapprove of the National Physicians Committee?" The answers were:

	Total	Upper Income	Middle Income	Lower Income
Have not heard of NPC	95%	94%	95%	95%
Have heard	5	6	5	5
Approve of NPC	2	3	2	1
Disapprove		1		1
No opinion	3	2	3	3

To all intents and purposes, the NPC is unknown to the general public. This is as it was intended and as it should be.

On the other hand, within the medical profession there is an unusually high degree of awareness of this institution. The physicians of the nation were polled on the basis of opinion samples. Physicians were asked two questions: "Have you ever heard of the National Physicians Committee for the Extension of Medical Service?" and "Do you approve or disapprove of the National Physicians Committee?" The answers were:

(Continued on Page 439)



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OBITUARIES

George Wendell Phillips, M.D.
1887-1947

G. W. Phillips, M.D., Sayre, died September 1 following a heart attack several days before. He had been in ill health for more than a year.

Dr. Phillips was born at Mt. Carmel, Ky., in 1887 and moved to Sayre in 1918. He was a graduate of the University of Chicago and received his medical degree from the University of Tennessee. He was a former member of the Masonic lodge and of the I.O.O.F. lodge and was active in the American Medical Association and the Oklahoma State Medical Association. He was a member of the Christian church of Sayre.

Surviving are his widow, Mrs. Mattie Phillips of Sayre, one daughter, Mrs. Ten Wonder of Borger, one son, Wendell, of Sayre, two brothers, John and Henry of Hamilton, Ohio, one sister, Mrs. Nana Pennington, also of Hamilton, and two grandchildren.

Zale Chaffin, M.D.
1914-1947

Zale Craffin, M.D., died August 29 at Mercy hospital in Oklahoma City following an illness of two years.

Dr. Chaffin was with the state health department in 1937 and 1938 and joined the city health department the following year where he served until joining the army in 1942. Following his discharge from the army in 1945, he made his home in Bakersfield, Calif., until returning to Oklahoma City in July. Hs was graduated from the University of Oklahoma school of medicine in 1936.

Survivors include his widow, Violet, and three daughters, Toy, Gaye, and Judith of Bakersfield, and his parents, Mr. and Mrs. Owen Chaffin, three sisters, Mrs. Edwin Fair, Miss Betty Lou Chaffin, and a brother, Bill, all of Oklahoma City. Another sister, Mrs. Louis Humpton, lives in Providence, R. I.

John Maxwell Watson, M.D.
1873-1947

John Maxwell Watson, M.D., died at his home in Enid July 31 following a heart attack.

Born at Vienna, Ind., he attended the Louisville, Ky., medical school and the Washington university medical school at St. Louis where he was graduated in 1898. Dr. Watson came to Hunter in 1903 and later moved to Lamont where he practiced medicine until he came to Enid in 1923.

Dr. Watson was city physician and health officer at the time of his death and he had served as president of the Grant County Medical Society when he lived in Lamont. He served several times as president of the Garfield County Medical Society during his residence in Enid. Active in civic affairs, he was also a member of the Masonic lodge.

Surviving are his widow of the home address in Enid and five daughters, Mrs. Louis Wilke of Denver, Colo., Mrs. Evans Talley of Enid, Mrs. C. W. Edwards of Chicago, Mrs. Virginia Pickens of Enid, and Eleanor Watson of Enid. A sister, Mrs. August Henderson of Jeffersonville, Ind., and six grandsons and one granddaughter also survive.

T. F. Spurgeon, M.D.
1863-1947

T. F. Spurgeon, M.D., pioneer Oklahoma physician, died August 14 at his home in Frederick following a three months illness.

Dr. Spurgeon is a graduate of the Barnes Medical College, St. Louis, Mo., with the class of 1898 and had been a practicing physician in Frederick since 1900. He was a member of the Baptist church of Frederick, the Frederick lodge, Ancient Free and Accepted Masons and was one of the organizers of the Tillman County Medical Society. He was active in civic affairs and took a prominent part in the betterment of schools in his section of the state.

Among the survivors are the widow, Mrs. Leora F. Spurgeon, a son, Theron L. Spurgeon, both of Frederick; a daughter, Mrs. Knox Byrum, Shawnee, a granddaughter, Leah Frances Byrum, Shawnee; a brother, G. M. Spurgeon, and a sister, Mrs. J. M. Nulty, both of Frederick.

Catherline T. Brydia, M.D.
1875-1947

Catherine T. Brydia, M.D., died August 16 in Ada after an illness of two weeks.

Dr. Brydia was a graduate of the American Medical School, St. Louis, Mo., in 1913. Specializing in obstetrics and diseases of women and children, Dr. Brydia was approved at a special meeting of the Board of Commonwealth Foundation for graduate work in obstetrics which she completed at Martha Hague hospital, Jersey City, New Jersey, the only exception ever made for a doctor over 65. She served as president of the Pontotoc County Medical Society and then on the state board of health.

She is survived by her husband, Fred F. Brydia, two daughters, Mrs. Grace Canada and Mrs. Orel Busby, six grandchildren, five sisters and five brothers.

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BOOK REVIEWS

CONCISE ANATOMY. Linden F. Edwards, Ph.D., Professor of Anatomy, Ohio State University. 472 illustrations, some in color. 548 pages. The Blakiston Company, 1947. Price $5.50.

This newly titled book is an enlargement and revision of a previous work, *Anatomy for Physical Education*. The author considers the new book also adaptable to such courses as physical therapy, medical technology, dental hygiene, nurse's training, and other disciplines peripheral to medicine. The book contains 548 pages, and includes a bibliography of 47 names, largely those of textbooks. The index covers 29 pages, where topical entries are in Roman type, with illustrations of these topics in italics. Approximately the first one-fourth of the book is devoted to general anatomical considerations embracing the whole field of systemic anatomy under the following chapter headings: General Microscopic and Developmental Anatomy, General Osteology, General Arthrology, General Myology, General Neurology, General Angiology, and General Dermatology. Thus the background necessary to a proper understanding of anatomical structure is provided by a skillful combination of factual anatomy with general biological information. Certain subjects not customarily found in textbooks of anatomy are here briefly presented, e.g., the function of phosphatase in bone formation, also the role of bone tissue in providing a free calcium reserve which is drawn upon by the blood when blood calcium falls below 10 mg. per 100 cc. of serum.

In an introductory chapter the author points out that certain pathological conditions and physical anomalies indicate maladjustments of the human organism. He expresses the opinion that maladjustment to the upright posture is reflected in hernia, prolapse of certain viscera, varicose veins and dizziness. He thinks that these and other conditions indicate an "inadequacy of adaptation to the vertical stance." Another example of maladjustment the author calls "maladjustment to human sexual dimorphism," as demonstrated in hermaphrodism "physical or psychic." Also considered in this category are functional mammary glands in males (gynecomastica) and the absence of such glands in females (amastica). As part of the chapter on angiology is a very complete account of the composition of blood. Here opsonins, fibrinogen, prothrombin, and antitoxins are designated "protective substances," whereas hormones are considered "regulative substances." The reticuloendothelial system is briefly defined and discussed. The phases of the cardiac cycle are analyzed, with estimates of the time interval required for each. Clinical conditions such as arterio-sclerosis, aneurysm, and varicose veins are discussed.

Most of the book (357 pp.) is devoted to the gross anatomy of the extremities, head, neck, trunk, thorax, and abdomen, taken in that order. The endocrine system is accorded a separate chapter. The study of muscles is greatly facilitated by tabulation of the details of origin, insertion, nerve supply, and action. Illustrative material is ample (324 figs.), but is to a large extent borrowed from other works on anatomy and allied subjects. A number of these figures were not too good in the original, and of course were not improved in the process of copying.

Concise Anatomy covers very thoroughly the fundamentals of its subject, and should suffice to meet the needs of those who require a comprehensive introduction to human anatomy. Its style is clear and vigorous, rendering the subject matter easy to read and understand; these excellent qualities should make it a valuable handbook for those who wish to retain a working knowledge of anatomy.—Ralph E. Chase, A.B., B.S., A.M.

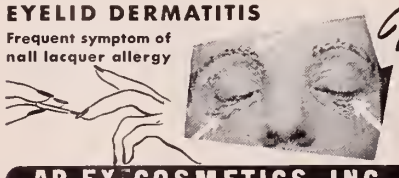
THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. A complete dictionary of the terms used in medicine, surgery, dentistry, pharmacy, chemistry, nursing, veterinary science, biology, medical biography, etc., with the pronunciation, derivation, and definition by W. A. Newman Dorland, A.M. M.D., F.A.C.S., Lieut. Col., M. R. C., U. S. Army, member of the committee on nomenclature and classification of diseases of the American Medical Association, editor of "American Pocket Medical Dictionary"; with the collaboration of E. C. L. Miller, M.D., Medical College of Virginia. Twenty-first edition with 880 illustrations, including 233 portraits. 1660 pages. W. B. Saunders Co.: Philadelphia and London, 1947.

The twenty-first edition of Dorland is on the reviewer's desk. The publishers have rendered a great service to the medical profession by so promptly assembling and defining the new words and terms arising through the exigencies of war and in the normal course of progress.

We can do no better than to cite the first paragraph of the preface to this edition:

"This twenty-first edition of the Dictionary aims to cover as completely as possible the voluminous additions to medical terminology resulting from the research and discovery of the war years. Besides the field of actual war medicine and surgery, these additions are rich in the specialties of tropical medicine; aviation medicine; medical zoology and mycology; biochemistry and pharmacology, with antibiotics, enzymes, vitamins and endocrines; physics, and nucleonics, including the medical applications of radioactive isotopes of the chemical elements. The entire volume has been scrutinized line by line in the interest of factual and typographic accuracy."

The editors indicate that they had advice and help from staff members of the A.M.A., the Mayo Clinic, medical teachers, and many others. The W. B. Saunders Company deserves commendation.—Lewis J. Moorman, M.D.

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HAVE YOU HEARD?

J. J. Smith, M.D., of Shattuck has been appointed County Superintendent of Health of Ellis County.

Eight initiates from Oklahoma were accepted into fellowship at the 23rd convocation of the American College of Surgeons held in New York September 12 as the final event of the clinical congress. They are *Nasry F. V. Barkett, M.D.*, Oklahoma City; *Battey B. Coker, M.D.*, Durant; *Everett B. Neff, M.D.*, Oklahoma City; *Cole D. Pittman, M.D.*, Bartlesville; *Franklin D. Sinclair, M.D.*, Tulsa; *Robert S. Srigley, M.D.*, Ardmore; *Richard G. Stoll, M.D.*, Chickasha; and *Benjamin W. Ward, M.D.*, Tulsa.

W. E. Hubbard, M.D., formerly of Frederick, has recently opened an office in Tipton. Dr. Hubbard served three and one-half years as an army surgeon.

M. B. Prentiss, M.D., has resumed his practice at Snyder after spending the past few years in Florida. He is the father of *H. M. Prentiss, M.D.*, Roosevelt, who is in Rochester, Minn., taking postgraduate work in surgery at Mayo Hospital.

Two new assistant physicians are now on duty at Central State Hospital, is has been announced. They are *H. B. Witten, M.D.*, and *George W. Winkelman, M.D.* Both are graduates of the University of Oklahoma School of Medicine and were in military service during the war.

Samuel B. Leslie, Jr., M.D., has opened an office at Morris for the practice of general medicine and surgery. A graduate of the University of Oklahoma School of Medicine, he interned at the University of Kansas Hospital and was on the surgical staff of a general hospital overseas while in the army.

M. M. Turlington, M.D., recently celebrated his 79th birthday and invited all the old timers of his home town of Seminole to a birthday dinner to help him celebrate and reminisce.

O. L. Parsons, M.D., attended the Third American Congress on Obstetrics and Gynecology at St. Louis in September. Dr. Parsons is from Lawton.

J. B. Hollis, M.D., Mangum, attended the national American Legion convention in New York City and addressed the Mangum Rotary Club recently giving highlights of the convention. Dr. Hollis is a member of the national rehabilitation committee of the Legion.

John R. Reid, M.D., has returned to Altus to resume medical practice after a year's absence spent in special study in Los Angeles.

J. B. Tolbert, M.D., formerly of Oklahoma City, has established a practice in the First National Bank Building in Mountain View, Oklahoma. He is a graduate of Oklahoma University School of Medicine, and for the past year has been resident physician and surgeon at the Oklahoma City General (Mercy) hospital.

MEDICAL SCHOOL

CALENDAR — OCTOBER, 1947

SURGICAL PATHOLOGIC CONFERENCES—Each Tuesday 12:00 Noon to 1:00 P.M.

MEDICAL CONFERENCES—Each Wednesday 9:00 A.M. to 10:00 A.M.

CLINICAL PATHOLOGICAL CONFERENCES — Each Thursday 12:00 Noon to 1:00 P.M.

TUMOR CLINICS—First and Third Tuesdays (October 7 and 21) 8:00 A.M. to 9:00 A.M.

UROLOGICAL-PATHOLOGIC CONFERENCE—Second Tuesday (October 14) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING—Second Friday (October 10) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE—Fourth Monday (October 27) 6:45 P.M. to 7:30 P.M.

Frank H. Austin, M.D., (Med '45) has received an appointment of residency at University Hospital, Columbus, Ohio.

James Larry Southworth (Med '38) was a recent visitor in Oklahoma. At present he is assistant chief surgeon at the U. S. marine hospital in Baltimore, Md. Dr. Southworth, author of numerous articles in *The New England Medical Journal* and *The Journal of the American Medical Association*, is now engaged in research on hypertension.

Cleve Beller (Med '43) has been appointed resident in medicine at University Hospital, Oklahoma City.

Lieutenants John Blender (Med '45), Ross Miller (Med '45), and Robert LeNeve (Med '45) have been assigned to the Far Eastern Command, U. S. army, Yokohama, Japan.

Jack B. Garlin (Med '45), now a Lt. j.g. stationed at the USMC supply depot in Barstow, Calif., was a recent visitor at the medical school.

Frank W. Woods (Med '35) may now be reached at 601 Huntington Building, Miami, Fla. He has resumed private practice of urology there.

NEW MEMBERS

Physicians who have recently associated with their County Medical Societies and the Oklahoma State Medical Association as new members are as follows:

William S. Bivens, Medical Arts Building, Tulsa
Leonard J. Ellis, 4601 Reeves Drive, Oklahoma City
Royston Miller, 2020 Xanthus, Tulsa

H. M. McClure, M.D., Chickasha, was principal speaker at a Rotary Club noon luncheon recently. Dr. McClure reported on the club's disaster committee and the plans that have been drawn up.

C. A. Traverse, M.D., Alva, was elected president of 257 candidates for the 32nd degree in Scottish Rite Masonry. The degrees were received in Guthrie.

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Dr. Albert H. Aldridge—Obs. and Gyn.
New York City

Dr. Charles Branch—Pathology
Chicago

Dr. Granville A. Bennett—Pathology
Chicago

Dr. Alexander Brunschwig—Surgery
New York City

Dr. Mandred W. Comfort—Internal Medicine
Rochester, Minn.

Dr. Manuel M. Garcia—Radiology
New Orleans, La.

Dr. Jack S. Guyton—Ophthalmology
Baltimore

Dr. Edw. Starr Judd, Jr.—Surgery
Rochester, Minn.

Dr. J. H. Maxwell—Otolaryngology
Ann Arbor, Mich.

Dr. L. H. Mousel—Anesthesia
Washington, D. C.

Dr. Chas. M. McLane—Obs. and Gyn.
New York City

Dr. Robert Collier Page—Internal Medicine
New York City

Dr. Geo. E. Shambaugh, Jr.—Otolaryngology
Chicago

Dr. Clifford Sweet—Pediatrics
Oakland, Calif.

Dr. Phillips Thygeson—Ophthalmology
San Jose, Calif.

Dr. Edw. Weiss—Internal Medicine
Philadelphia

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MEDICAL ABSTRACTS

EPIDEMIC RETROBULBAR NEURITIS IN THE PHILIPPINES DURING THE JAPANESE OCCUPATION. G. de Ocampo et al. American Journal of Ophthalmology, 30:698-704, (June) 1947.

There are more and more reports on the ocular lesions of prisoners of war and the possible role of malnutrition in the development of eye disease. The report of the present authors is based on studies made on Filipinos who suffered from retrobulbar optic neuritis which occurred in epidemic proportions in the Philipines during 1942 and 1943.

The Philippine epidemic commenced soon after the outbreak of the war and reached its peak of incidence about December, 1942; it disappeared at the end of 1943. The present report is a follow-up study of 28 cases. The youngest patient in the series was 15 years of age, and the oldest 60 years of age. The average age was 32 years. There was no difference in the incidence according to the sex of patients. All patients were of the middle class. Many of them were unemployed but none of them was destitute. The disease, however, could be found even in wealthy patients.

Except in one case, all patients had dilateral affection. The primary complaint was a failure of vision described as similar to that observed when looking through smoke. The maximum failure of vision was three to four weeks after the onset of the disease. Photophobia was a complaint in one third of the cases. Some patients complained of lacrimation with either itching, redness, or smarting of the eyes. Ocular pain, mucoid discharge, dizziness, and the sensation of warmth in the eyes was observed in some instances. Headache, generally frontal, was present in four cases. Angular blepharitis associated with angular stomatitis was noted in only one case. Bilateral scotoma was a complaint of only one case.

Augular stomatitis was present at one time or another during the course of the eye disease in 71 per cent of the patients. Symptoms referable to peripheral neuritis, such as numbness around the mouth and of the extremities and paresthesia of the toes, feet, legs, or fingers, hand, and forearms, were pound in 50 per cent of the patients. Glazed tongue, scrotal pruritus were other characteristic symptoms. All patients lived upon an improper diet, limited to rice and fish. None of them showed, however, a loss of weight.

In all except two cases there were no external signs of the eye disease. One patient showed slightly abnormal limbal vascularization, and another had an anterior polar cataract. The vision in all cases ranged from 20/30 to 2/200 or less. The subnormal near vision present in all cases was not due to accommodative error.

A scotoma was demonstrable in every case. It was absolute in 24, and relative, espceially to red, in four. The blind spots were normal in 50 per cent of the patients. Sixty-four per cent had normal visual fields, while others showed contraction of the field to different degrees. Seventy one and four tenths per cent had normal fundi. A few showed pallor of the optic disc, while others had no foveal reflexes.

Various forms of treatment were tried. A change of diet with the addition of beans containing around 90 international units of vitamin B_1 (per serving) plus green leafy vegetables was advised in half of the series. Others were instructed to take orange and rice bran. In some cases transorbital diathermy was also tried. There was an improvement in 78 per cent of the patients.

In connection with the epidemic the authors studied the diagnosis and the nature of retrobulbar neuritis. Absence of foveal reflexes is of little significance; it may occur also in normal people. When the relative scotoma for red is more prominent than for blue the condition is more likely a retrobulbar neuritis than a retinal lesion.

The term "retrobulbar neuritis" is preferable to "nutritional amblyopia" or to "optic atrophy." The patients were suffering from a combined deficiency of many food factors. Children were remarkably exempt from this epidemic.

There is much confusion in the literature concerning the nutritional causes of retrobulbar neuritis. Vitamin deficiencies produced experimentally do not produce retrobulbar neuritis. This disease is a dystrophy of a nerve, and the history of each individual nervous system is important for the explanation of the onset of this disease. During the Japanese occupation the shortage of food as well as the steady strain on the emotions was traumatic to the nervous system. Even in the ordinary toxic amblyopia of smokers and drinkers, amblyopic symptoms most likely develop during a period of emotional strain.

The authors also believe that the Filipino is liable to diseases of the nerves and of the nervous system. This racial predisposition was the "soil" of the described epidemic retrobulbar neuritis.

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WHAT DOES THE PUBLIC THINK?
(Continued from Page 431)

		Approve	Disapprove	Qualified Answer	No Opinion
Have heard of NPC	75%	45%	16%	11%	28%
Have not heard	25				

Thus is recorded a 3 to 1 vote of definite approval of NPC and an additional 11% of tacit approval, by the profession.

NPC's value and place, after only seven years of efforts, is established not only by the opinions of the public but as well by the opinions of physicians on the issues with which it has been chiefly concerned. Physicians were asked, "Are you familiar with the Wagner-Murray-Dingell Bill which proposes to set up a Federal Medical Care Program to be paid for out of increased social security payroll deductions?" The responses were:

	1945	1947
Yes, am familiar	86%	91%
No, am not familiar	14	9

and the question, "From the standpoint of the *general public,* do you think the passage of this bill or some similar bill would be a good thing or a bad thing?" The responses of the 91 out of every 100 who were familiar with these proposals were:

Good thing for the public	11%
Bad thing	78
Some ways good — some bad	10
No opinion	1

And one other question answered by physicians who were familiar with the Wagner-Murray-Dingell Bills, "From the standpoint of the *doctors* of the country, do you think passage of this bill or some similar bill would be a good thing or a bad thing?" The answers were:

	1945	1947
Good thing for doctors	12%	9%
Bad thing for doctors	76	81
Some good — some bad	9	7
No opinion	3	3

In such manner, through this nation-wide investigation by a recognized and impartial research institution, the public has registered its opinions of the American Medical Association and its awareness of the great basic issues involved.

In the same manner the physicians have registered their opinions of the National Physicians Committee and their attitudes toward these same issues. Out of such degree of awareness and such practically unanimous opinion came the strength that has maintained continuously the independence of the medical profession.

In the future this unity may well become not only the deciding factor in preserving our public-approved system of private medical practice, but also the deciding factor in preserving our American institutions and our Freedom of Enterprise.

OUTSTANDING PROGRAM LISTED BY CLINICAL SOCIETY

Another outstanding program has been planned by the Oklahoma City Clinical Society for its annual fall conference slated for October 27, 28, 29, and 30 at the Biltmore hotel, Oklahoma City.

Seventeen guest speakers, postgraduate symposia, general assembies, round-table luncheons, a clinic dinner, the annual smoker, the president's dinner, and the clinical pathological conference will feature the conference, which is now in its 17th year.

General assemblies as scheduled from 9 a.m. to 5 p.m. and round-table luncheons at noon each day will be held separately for medical and surgical groups with one combined luncheon to be conducted. Physicians are invited to bring their families to the clinic dinner Tuesday night at the Skirvin Tower hotel but the smoker is strictly a stag party. The president's dinner will be held Monday night with admission by ticket only, which may be secured at the registration desk.

The postgraduate symposia hours have been arranged so that all material on a related subject is scheduled at different times on the program and never conflicts. Affording a change from lectures and symposia, the clinical pathological conference is also to be one of the highlights of the four day meeting.

Guest speakers have been selected from the leading medical centers of the country and include: Edward Allen, M.D., gynecology, clinical associate professor of gynecology and obstetrics, University of Illinois School of Medicine (Rush), Chicago, Ill.; William Arthur Altemeier, M.D., surgery, assistant professor of suregry, College of Medicine, University of Cincinnati, Ohio; Carl E. Badgley, M.D., orthopedic surgery, professor of surgery and head of the department of orthopedic surgery, University of Michigan School of Medicine, Ann Arbor, Mich.

A. Carlton Ernstene, M.D., medicine, staff physician in charge of section on cardiovascular diseases, Cleveland clinic, Cleveland, Ohio; Wiley Davis Forbus, M.D., pathology, professor of pathology, Duke University School of Medicine, Durham, N. C.; Thomas E. Jones, M.D., surgery, chief of the surgical division, Cleveland clinic, Cleveland, Ohio; H. Dabney Kerr, M.D., radiology, head of the department and professor of radiology, College of Medicine, University of Iowa, Iowa City, Iowa; Linwood D. Keyser, M.D., urology, attending general and urological surgeon, Roanoke hospital, Roanoke, Va.;

Edward L. Bortz, M.D., president of the American Medical Association, Philadelphia, Pa.; Edward Lacy King, M.D., obstetrics, professor of obstetrics, Tulane University School of Medicine, New Orleans, La.; Frank D. Lathrop, M.D., otolaryngology, otolaryngologist, Lahey Clinic, Boston, Mass.;

George M. Lewis, M.D., dermatology, associate clinical professor of dermatology, Cornell University School of Medicine, New York City, New York; Samuel F. Marshall, M.D., pediatrics, professor of pediatrics, pediatrician in chief, University of Kansas School of Medicine, Kansas City, Kans.; C. Wilbur Rucker, M.D., ophthalmology, associate professor of ophthalmology, Mayo Foundation, Graduate School of the University of Minnesota, Rochester, Minn.;

Cyrus C. Sturgis, M.D., medicine, professor of internal medicine, University of Michigan School of Medicine, Ann Arbor, Mich.; and Elmer G. Wakefield, M.D., medicine, associate professor of medicine, Mayo Fundation, Graduate School of the University of Minnesota, Rochester, Minn.

Room reservations may be made direct with Oklahoma City hotels or by communicating with the executive secretary, 512 Medical Arts, Oklahoma City.

OBSTETRICS-GYNECOLOGY EXAM SET

The next written examination (part one) for all candidates for the American Board of Obstetrics and Gynecology, Inc. will be held Friday, February 6, 1948.

OFFICERS OF COUNTY SOCIETIES, 1947

COUNTY	PRESIDENT	SECRETARY	MEETING TIME
Alfalfa	L. R. Kirby, Cherokee	L. T. Lancaster, Cherokee	Last Tues. each Second Month
Atoka-Bryan-Coal-Johnston	J. S. Fulton, Atoka	A. T. Baker, Durant	
Beckham	O. C. Standifer, Elk City	J. E. Levick, Elk City	Second Tuesday
Blaine	Fred Perry, Okeene	Virginia Curtin, Watonga	Third Thursday
Caddo	George W. Conover, Jr., Anadarko	Edward T. Cook, Jr., Anadarko	Third Thursday
Canadian	G. L. Goodman, Yukon	Jack W. Myers, El Reno	Subject to Call
Carter	J. M. Gordon, Ardmore	C. D. Cunningham, Ardmore	Second Tuesday
Cherokee	P. H. Medearis, Tahlequah	R. K. McIntosh, Jr., Tahlequah	First Tuesday
Choctaw-McCurtain-Pushmataha	Reed Wolfe, Hugo	Fred D. Switzer, Hugo	
Cleveland	Orville Woodson, Norman	T. A. Ragan, Norman	Thursday nights
Comanche	Leslie T. Hamm, Lawton	Byron W. Aycock, Lawton	Third Tuesday
Cotton	G. W. Baker, Walters	Mollie Seism, Walters	Third Friday
Craig	P. L. Hayes, Vinita	J. M. McMillan, Vinita	
Creek	O. H. Cowart, Bristow	F. H. Sisler, Jr., Bristow	Second Tuesday
Custer	Willard H. Smith, Clinton	D. W. McCauley, Clinton	Third Thursday
Garfield	Francis M. Duffy, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	Thomas F. Gross, Lindsay	John R. Callaway, Pauls Valley	Wed. before 3rd Thur.
Grady	R. R. Coates, Chickasha	Wesley W. Davis, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	F. P. Robinson, Pond Creek	
Greer	Dwight D. Pierson, Mangum	J. B. Hollis, Mangum	
Harmon	W. G. Husband, Hollis	R. H. Lynch, Hollis	First Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams, McCurtain	
Hughes	Clyde Kernek, Holdenville	H. V. Schaff, Holdenville	First Friday
Jackson	E. W. Mabry, Altus	J. P. Irby, Altus	Last Monday
Jefferson	J. A. Dillard, Waurika	O. J. Hagg, Waurika	Second Monday
Kay-Noble	E. C. Mohler, Ponca City	Edwin Yeary, Ponca City	Second Thursday
Kingfisher	John R. Taylor, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	J. Wm. Finch, Hobart	R. F. Shriner, Jr., Hobart	
LeFlore	John H. Harvey, Heavener	Rush L. Wright, Poteau	
Lincoln	J. S. Rollins, Prague	Ned Burleson, Prague	First Wednesday
Logan	James Petty, Guthrie	J. E. Souter, Guthrie	Last Tuesday
Mayes	E. H. Werling, Pryor	Paul B. Cameron, Pryor	
McClain	I. N. Kolb, Blanchard	W. C. McCurdy, Jr., Purcell	
McIntosh	F. R. First, Sr., Checotah	W. A. Tolleson, Eufaula	Third Thursday
Muskogee-Sequoyah-Wagoner	W. P. Fite, Muskogee	William N. Weaver, Muskogee	First Tuesday
Northwestern	Myron England, Woodward	C. W. Tedrowe, Woodward	2nd Thurs. Even Mo.
Okfuskee	L. J. Spickard, Okemah	M. L. Whitney, Okemah	
Oklahoma	F. Redding Hood, Oklahoma City Mrs. Muriel Waller, Exec. Secty.	George E. Kimball, Oklahoma City	Fourth Tuesday
Okmulgee	John Cotteral, Henryetta	C. E. Smith, Henryetta	Fourth Tuesday
Osage	R. O. Smith, Hominy		
Ottawa	B. Wright Shelton, Miami	W. Jackson Sayles, Miami	Third Thursday
Payne-Pawnee	C. H. Haddox, Pawnee	C. W. Moore, Stillwater	Second Thursday
Pittsburg	Homer C. Wheeler, McAlester	Edward D. Greenberger, McAlester	Third Friday
Pontotoc-Murray	E. D. Padberg, Ada	Ollie McBride, Ada	First Wednesday
Pottawatomie	Charles F. Paramore, Shawnee	Clinton Gallaher, Shawnee	1st and 3rd Saturday
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	
Seminole	Claude B. Knight, Wewoka	Mack I. Shanholtz, Wewoka	
Stephens	E. H. Lindley, Duncan	E. C. Lindley, Duncan	Third Wednesday
Texas	Daniel S. Lee, Guymon	E. L. Buford, Guymon	Third Wednesday
Tillman	G. A. Tallant, Frederick	O. G. Bacon, Frederick	
Tulsa	E. O. Johnson, Tulsa Mr. Jack Spears, Exec. Secty.	John E. McDonald, Tulsa	Second and Fourth Monday
Washington Nowata	Thomas Wells, Bartlesville	L. B. Word, Bartlesville	
Washita	A. H. Bungardt, Cordell	Aubrey E. Stowers, Sentinel	Second Wednesday
Woods	C. A. Traverse, Alva		Last Tuesday Odd Months

COUNCILORS AND VICE-COUNCILORS

(Figure indicate year terms expire.)

District No. 1: Alfalfa, Beaver, Cimarron, Dewey, Ellis, Harper, Texas, Woods, Woodward—O. E. Templin, M.D., Alva (C) 1950; O. C. Newman, M.D., Shattuck (V-C) 1950.

District No. 2: Beckham, Custer, Greer, Harmon, Jackson, Kiowa, Roger Mills, Tillman, Washita—L. G. Livingston, M.D., Cordell (C) 1948; O. C. Standifer, M.D., Elk City (V-C) 1950.

District No. 3: Garfield, Grant, Kay Noble, Pawnee, Payne—Bruce Hinson, M.D., Enid (C) 1950; R. W. Choice, M.D., Wakita (V-C) 1950.

District No. 4: Blaine, Canadian, Cleveland, Kingfisher, Logan, Oklahoma—Carroll Pounders, M.D., Oklahoma City (C) 1950; Joe Phelps, M.D., El Reno (V-C) 1950.

District No. 5: Cadda, Carter, Comanche, Cotton, Grady, Jefferson, Love, Stephens—J. L. Patterson, M.D., Duncan (C) 1948; J. Hobson Veazey, M.D., Ardmore (V-C) 1950.

District No. 6: Creek, Nowata, Osage, Rogers, Tulsa, Washington—Ralph McGill, M.D., Tulsa (C) 1949; Ralph Rucker, M.D., Bartlesville (V-C) 1950.

District No. 7: Garvin, Hughes, Lincoln, McClain, Murray, Okfuskee, Pontotoc, Pottawatomie, Seminole—Clinton Gallaher, M.D., Shawnee (C) 1950; Ned Burleson, M.D., Prague (V-C) 1950.

District No. 8: Adair, Cherokee, Craig, Deleware, Mayes, Muskogee, Okmulgee, Ottawa, Sequoyah, Wagoner—J. G. Edwards, M.D., Okmulgee (C) 1948; W. J. Sayles, M.D., (V-C) 1950.

District No. 9: Haskell, Latimer, LeFlore, McIntosh, Pittsburg—Earl Woodson, M.D., Poteau (C) 1948; E. H. Shuller, M.D., McAlester (V-C) 1950.

District No. 10: Atoka, Bryan, Choctaw, Coal, Johnston, Marshall, McCurtain, Pushmataha—W. K. Haynie, M.D., Durant (C) 1950; W. W. Cotton, M.D., Atoka (V-C) 1950.

THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

WHO IS SHOCK PROOF

The following paragraph from an editorial entitled "Have We Become Shock Proof" appearing in the Sunday Oklahoman of September 21 brings this question to the Editorial page of the Journal.

"Continuing disclosures of graft and corruption in every level of government, which are almost daily reading in the nation's press, seem to leave the American public strangely apathetic."

In response to an earnest expression of concern about socialistic trends and the continued threat of compulsory health insurance this curt note comes from the President of the United States:

"I read your letter of July seventh with some surprise.

"It is perfectly apparent that you are not familiar with the Public Health Program advocated by this Administration.

"I am sorry that you haven't taken the trouble to enlighten yourself on the subject."

In this connection attention is called to the "Investigation of the Participation of Federal Officials in the Formation and Operation of Health Workshops, Third Intermediate Report of the Committee on Expenditures in the Executive Departments."

The report shows that six agencies in the Executive branch of government are "using Government funds in an improper manner for propaganda activities supporting compulsory national health insurance, or what certain witnesses and authors of propaganda refer to as socialized medicine, in the United States.

"This report summarizes our hearings on this phase of the inquiry to date and presents the conclusions arrived at, following careful evaluation of the testimony and documentary evidence presented by, and relating to, the several Federal agencies involved.

"The departments, bureaus, and agencies known to have participated in this campaign are:

1. The United States Public Health Service;
2. The Children's Bureau;
3. The Office of Education;
4. The United States Employment Service;
5. The Department of Agriculture; and
6. Bureau of Research and Statistics, Social Security Board.

"Your committee finds that the use of Federal funds for the purpose of influencing legislation before Congress is unlawful under Section 201, Title 18, of the United States Code. We have, therefore, brought these matters to the attention of the Department of Justice, with a request that the Attorney General at once initiate proceedings to stop this unauthorized and illegal expenditure of public moneys."

The committee report contains many flagrant breaches of public decorum and impositions on the anxious taxpayers from whom the United States is being stolen, unobtrusively as the bureaucrats think, piece by piece.

Space will not permit free references and quotations but since the ambitious director of the Social Security board has made clear his desire to become the arbiter of every man's physical welfare the following paragraph is lifted from the report.

"At a later date, your committee will submit a separate detailed report on the activities of the Social Security board during the last 10 years in behalf of what certain witnesses and authors of propaganda refer to as socialized medicine."

Since the Children's Bureau is just now being so free with the taxpayers' money — offering subsidies to physicians who attend

postgraduate courses — the following from this committee's report should be brought to the attention of the medical profession.

"The same attitude of intolerance toward honest discussion or debate of the issue was indicated in the testimony of Mr. Harry J. Becker, health consultant in the United States Children's Bureau, Federal Security Agency.

"Questioned as to the number of speeches he had made throughout the country in advocacy of the subject, the witness recalled several such appearances. Committee counsel, Frank T. Bow, pressed the inquiry (transcript of hearing, June 18, 1947, p. 228): . . . 'The Children's Bureau, Federal Security Agency, was represented in the health workshops movement by Mr. Harry J. Becker, a full-time employee of the Federal Security Agency, in the capacity of health consultant. Mr. Becker while engaged in his Federal position, also was one of the principal organizers of the Group Health Association of Washington, D. C., of which he later became president. He is also vice-president of Cooperative Health Federation of America, which he helped organize in meetings at Two Harbors, Minn., and Columbus, Ohio, while on the full-time pay roll of the Children's Bureau.

"In this connection, your committee recalls that it was the activities of the Group Health Association of Washington, D. C., which led to the filing, in 1937, of the antitrust proceeding against the Medical Society of the District of Columbia and the American Medical Association under the Sherman Antitrust Act.

"This legal action by the Department of Justice was carried to the Supreme Court of the United States on the basis of the original complaint and accusations of Group Health Association of Washington, D. C., serving effectively to intimidate and restrain the activities of the American Medical Association in resisting the Federal propaganda.

"Mr. Becker was a witness before your committee on June 18. His testimony delineates in some detail the historical development of the movement within the Federal Government to set up, at Federal expense, a nation-wide campaign in support of pending legislation. Your committee invites particular attention to the testimony and cross-examination of Mr. Becker, because we feel that the devices and arrangements of Federal employment in this instance provide a typical example of how funds appropriated by Congress for the legitimate expenses of Federal agencies are diverted within the bureaus to full-time propaganda for what certain witnesses and authors of propaganda refer to as socialized medicine."

All this poses two pertinent questions:

1. "Is the President of the United States enlightened?"

2. "If so, why didn't he close the curt note by saying, 'I hope you have not taken time to enlighten yourself on the subject'?"

*For the reader's information, it may be said that a copy of the letter addressed to the president was sent to all representatives from Oklahoma and to Senator Taft and that the response was very gratifying.

GYPING THE JAPS

After the editorial "Who Is Shock Proof" was written, a later report indicates that the social security board, the U. S. public health service, and possibly other agencies jointly sent a commission to Japan to prepare the way for a system of socialized medicine. These champions of the Wagner-Murray-Dingel bill having four times failed to bulldoze the American people into a passive acceptance of their Bearish bureaucratic bunk, they now plan to coerce and enslave an adolescent race, recently conquered, for the purpose of giving the world a choice between democratic freedom and rule by dictators and bureaucrats.

Our own democracy is limping and bleeding from the misappropriation of funds for this unauthorized mission which is directly opposed to the will of our people.

Despairing of salvation for the bureaucrats we say God save the people.

OKLAHOMA MEDICAL RESEARCH FOUNDATION

One last appeal to members of the State Medical Association who have not contributed to the Medical Research Foundation. It is unfortunate that all physicians could not be present at the great dinner meeting on October 3 when Major General Leslie R. Groves of atomic bomb fame discussed the broad principles of research and emphasized the importance of a foundation such as the one Oklahoma is now sponsoring.

To the physicians in the great audience assembled to hear General Groves, it was obvious that the eyes of the forward-looking people of this state are upon us.

After allowing for individual opinion as to values and the relative importance of demands upon the physician's resources, it may be said that inability to give because of poverty is to be understood and should lead to no embarrassment, but the penurious

withholding of funds is to be deplored and must ultimately result in an uneasy conscience.

Nearly 150 years ago the great physician and naturalist, Benjamin Rush, discussing the vices and virtues of physicians said, "Physicians have been distinguished in many instances, for their patriotism. By this virtue, I mean a disposition to promote all the objects of utility, convenience, and pleasure, and to remove all the vices of the country to which we belong. It embraces all the interests and wants of every class of citizens, and manifests itself in a great variety of forms. I shall briefly enumerate them.

"1st. It appears in acts of liberality to promote science, and particularly medicine. The British Museum was the gift of a physician to the British nation. Dr. Radcliff founded a library at Oxford, and bequeathed three hundred pounds to be applied to the maintenance of a constant succession of students of medicine, who should spend three years in foreign countries, in search of medical knowledge. Dr. Fothergill gave one hundred guineas a year to Dr. Priestley, to defray the expenses of his chemical laboratory. But the patronage afforded to science by that great man, was not confined to his own country. The Pennsylvania hospital will preserve, I hope, to the end of time, a testimony of his munificence, in the elegant casts and paintings of the gravid uterus, which compose a part of the museum of that institution."

INTERNATIONAL RELATIONS

Why do doctors of medicine throughout the world get along so much better than diplomats? In the field of medicine there is an international friendship and understanding which has no counterpart in the realm of world politics. If this unfortunate state of affairs is accepted as a criterion, the science of government is one hundred years behind the science of medicine.

Arthur C. Jacobson[1] discussing this subject says, "The science and art of government is about where it was in 1847, whereas it is obvious that the medicine of 1947 is decidedly not that of 1847."

With this in mind it seems strange that the U. S. government should be so anxious to take charge of medicine. Perhaps it should patch up its own habitation and stock its moral and ethical larders before taking medicine in for shelter and discipline. One hundred years ago medicine was organized for the purpose of advancing the science and art of medicine, for professional intercourse, the promotion of harmony in the profession, and the advancement of human weal. In peace it works for the prolongation of life and its abiding satisfactions. In war it follows the sword to bind up its wounds rather than to cripple and kill.

This is medicine's bill of rights and its international shibboleth.

1. Jacobson, Arthur C.: Today's Medicine in Proper Perspective, *Medical Times*, 75:9, Page 244, (Sept.) 1947.

THE SOUTHERN IN BALTIMORE

On November 24-27, the Southern Medical Association meets in Baltimore. What a happy combination this is for the Southern Medical Association, for the members, and for Baltimore. Here in the cradle of modern American medical science where present day clinical instruction found its chief impetus, the second largest medical association in the world will gather its members under auspicious stars.

It is to be hoped that many Oklahoma physicians will be there to partake of medical learning and to imbibe freely the local professional lore.

UNFAIR TO DOCTORS

In his interesting story *Plato and Dionysius*, Ludwig Marcuse, "exiled from his native Germany," as he says, "by a modern Dionysius," makes the following statement:

"His [Dionysius'] brother-in-law Dion had wanted toward the end to speak to him once more about his sister Aristomache's children, but at that point the physicians intervened. In the interest of the heir apparent they administered a sedative to their exalted patient. From the resultant coma Dionysius I never awoke. Where priests fall short, the men of medicine are ready and willing to supplement their efforts. They had effectually superintended the transfer of power to Dionysius II."

Marcuse's reference to men of medicine as being ready and willing must have been based upon his knowledge of German physicians under the Bismarckian rule caught in Hitler's Fascist net. American physicians would not administer a dose for the purpose of removing one dictator from the path of another.

Gratitude is a nice touch of beauty added last of all to the countenance, giving a classic beauty, an angelic loveliness, to the character.—*Theodore Parker.*

SCIENTIFIC ARTICLES

INFANT CYANOSIS AND NITRATES

GRADY F. MATHEWS, M.D. AND E. P. SELLNER, M.S.

OKLAHOMA CITY, OKLAHOMA

The occurrence of methemoglobinemia in infants due to the presence of nitrates in well water is more common than has been realized. The condition has sometimes been confused with congenital heart disease.

The usual story is that the infant became cyanotic (blue) and drowsy. At the hospital the infant recovered soon after the well water was removed from its diet. In other cases it is necessary to administer a dilute solution of methylene blue before the cyanosis is finally cleared up. It was soon realized that the only significant change in the infant's environment from farm home to hospital was in the water. A chemical analysis of the well water revealed a high nitrate content.

It would seem that the cyanosis of infants as noted above, was produced as a result of the ingestion of well water containing large amounts of nitrate compounds. It is believed that the nitrate ion is converted by bacterial action to the nitrite ion, in which form it is absorbed into the circulation and reacts with hemoglobin to form methemoglobin and its attendant cyanosis.

Actually, this is of great significance in a sanitary survey of a ground water supply, in that it changes our concept of the nitrogen cycle. Nitrates represent the final stage in the mineralization or oxidation of the nitrogen originally present in organic compounds. Previously it was thought that if the nitrate content was high and other forms of nitrogen were absent, the water had been purified and was safe to drink. While such waters do not seem to have a harmful effect upon older children and adults, they do have a serious and sometimes fatal effect on infants.

A recent case occurred in Oklahoma where the infant's condition was improved by removing the well water from its diet. The well was a drilled well having nitrate nitrogen content of 110 parts per million. Other cases have been reported in Kansas, Iowa, and Minnesota. A detailed account of two cases in Iowa is reported by Hunter H. Comly, M.D., in the Journal of the American Medical Association, 129, 2, 112-116, September 8, 1945. One case involved a nitrate nitrogen content of 90 parts per million, while the other infant was given water having a nitrate nitrogen value of 140 parts per million.

High nitrate waters are usually found in poorly constructed wells. In many cases the wells are old dug wells with inadequate casings or none at all, and not provided with proper surface slabs to prevent surface contamination from reaching the well.

Although no definite statements can be made regarding the "threshold value" for the nitrate nitrogen concentration, it appears to be advisable to recommend a safe limit of approximately 10 parts per million nitrate nitrogen for waters involving the feeding of infants. It must be understood that even boiling the water will not render high nitrate waters safe for infants.

The Oklahoma State Department of Health is interested in determining nitrate poisoning incidences. Any physician having a case in which poisoning from nitrates in well waters appears likely, may ask for a field investigation by the bureau of sanitary engineering.

Spontaneous Subarachnoid Hemorrage, Diagnosis, Management, and Prognosis: Presentation of Two Cases Resembling Dietl's Crisis and Six Fatal Cases of Ruptured Irtracranial Aneurysm (Two Luetic)

ARNOLD H. UNGERMAN, M.D. AND LEO LOWBEER, M.D.

TULSA, OKLAHOMA

The subject of subarachnoid hemorrhage has throughout the years received consideration by many authors. In 1923 Symonds in his classic comprehensive monograph outlined this disease entity as it is known today. Strauss, Globus, and Ginsburg defined spontaneous subarachnoid hemorrhage as a massive extravasation of blood into the subarachnoid space, caused by the spontaneous rupture of blood vessels. Subarachnoid hemorrhage is merely a symptom and not a disease entity. Sands and others outline its causes as (1) escaping blood from pial vessels due to trauma; (2) degeneration of vessel walls due to arteriosclerosis; (3) septic or infectious embolism; (4) ruptured intracranial aneurysms; (5) massive cerebral hemorrhages invading subarachnoid space; (6) intra-ventricular hemorrhage; (7) blood dyscrasia; (8) ruptured vescular neoplasm; (9) complications of encephalography; (10) post-operative focal necrosis of cerebral vessels; (11) as a complication in metrazol and insulin shock therapy; and (12) as a complication of artificially induced hyperpyrexia for C.N.S. Lues.

Extravasated blood into the subarachnoid space gives rise to focal and general symptoms. No condition has a more dramatic or sudden onset. The patient is perfectly well until the leaking blood may cause diffuse irritations and compression of the brain, together with meningeal irritations. The focal symptoms are the result of irritation or disturbed function of various parts of the nervous system. This causes an increased intracranial pressure and the classic symptom, headache, develops. It is sudden and excruciating, of such intensity as to be described as having been "struck at the base of the skull" (Symonds); In short order, comes vomiting and dizziness and in many instances a period of unconsciousness and coma. About 25 per cent of the cases display varying degrees of mental confusion, aphasia, and focal signs of cortical irritation may appear, as may generalized convulsions. The first headache may be localized at the nape of the neck, with radiation toward the vertex. It is frequently referred to the regions of the trigeminal nerve or to either eye. Subarachnoid blood following the optic neural sheaths may result in blurring of the margins of the discs and even papilledema. Sands describes an almost pathognomonic picture of the eye grounds, namely, "The center of the optic disc appears more elevated than the periphery and the margin is generally clearly outlined, the veins are not tortuous though may be congested." Obstruction of the retinal central vein may cause retinal hemorrhages. Invasion of blood into the other cranial nerve sheaths give rise to the various other cranial nerve dysfunction, pupillary disorders, extra occular, tongue and facial symptoms. The dizziness and coma is likewise due to the sudden increase in intra-cerebral pressure. The variability of the pupillary responses, from day to day, is another striking phenomenon (Shields). Pyramidal tract pressure with hemiparesis or hemiplegia may be present. Variability of the deep reflexes, first depressed, and later overactive, are seen.

Stiff neck, the most constant sign, appears early in the disease, and is due to the meningeal irritation. It is almost always accompanied by a positive Kernig sign. Movements of the head intensifies neck pain. Opisthotonus at times is very severe. The irritation of the dorsal spinal nerve roots has lead to referred pain along the course of the lumbar sacral roots, into the sciatic nerve as reported by Magree.

Without question, acute and chronic bleeding into the subarachnoid space can cause pain in the lower limbs.

Other patients may be seized with acute abdominal pain radiating to the lumbar sacral areas and then along the posterior or lateral aspect of one or both thighs into the sciatic nerve.

The usual temperature ranged between 99 and 101. Higher temperature indicated massive cerebral lesions with poor prognosis. The pulse rate is usually slow, below 70/min. Increasing pulse and rising temperature are unfavorable signs. The spinal fluid is pathognomonic. This is under increased pressure. One hundred ninety to 350 m.m. H_2O pressure is common. It is always uniformly bloody, may vary from pink to dark red, depending on degree and duration of bleeding. The supernatant fluid is faintly xanthochromic within three to four hours after onset and gradually becomes more xanthrochromic; usually it is clear and colorless in 10 days to two weeks, unless subsequent hemorrhages occur.

Bloody spinal fluid can be distinguished from blood due to trauma of spinal needle. In the former the blood is uniformly distributed throughout all three tubes, does not clot and has a xanthrochromic supernatant fluid.

The R.B.C. and W.B.C. count in the spinal fluid are at first proportional, later an increase in polys occurs. Leukocytosis from 10,000 to 13,000 is the rule except in the more massive hemorrhages, in which it is increased to 20,000. Albuminuria and glycosuna may be present due to pressure of blood in the vicinity of the fourth ventricle.

Hypertension, with a systolic pressure of 160 or over, accompanies many of these cases. With increased intra-cranial pressure, hypertension is quite the rule. Its continued increase is a grave sign.

An initial positive spinal fluid Wasserman is not uncommon. Though lues has accompanied subarachnoid bleeding, it is generally the consenses of opinion that it plays no part of its origin. However, post-mortem examinations on two cases pointed strongly to a luetic origin.

The incidence of sex has been generally reported as 50-50. The age incidence ranged in the majority between 20 and 60 years.

The majority of these patients were engaged in ordinary activity when rupture took place.

Wolf, Goodall, and Wolff reported that migraine and "recurrent headaches" of many years standing, occur in from 10 to 41 per cent of persons with subarachnoid hemorrhage due to ruptured intra-cranial aneurysm.

Aneurysms of cerebral vessels has been given attention for many years. It is generally conceded the most common cause of subarachnoid hemorrhage. Sands classified them as: (1) congenital; (2) arteriosclerotic; (3) mycotic. Their recognition, clinically or by angiography, has made it possible to determine their presence before rupture. Sands describes x-ray changes in the vicinity of Sella turcica, optic foramen, together with displacements of the pineal gland.

Management and treatment of patients with subarachnoid hemorrhage has six objectives: (1) relieve headache; (2) reduction of increased intra-cranial pressure; (3) control excitement; (4) proper feeding; (5) institute proper surgical procedure, if aneurysm can be diagnosed; (6) rehabilitate patient. The use of daily lumbar punctures is a controversial subject, but it is generally conceded that perhaps for the first few hours, after the initial hemorrhage, the danger of increasing hemorrhage is present, however, the subsequent repeated taps, using in every case a 22 gauge needle and manometer, and removing 10 to 20 cc. of fluid at a time, is both safe and beneficial to the disturbing headache due to increased intra-cranial pressure. Also, it reduces the subsequent morbidity resulting from the presence of blood in the subarachnoid spaces.

An increase in blood appearing during the tap, or the complaint of violent headache, should bring immediate cessation of the procedure. Bed rest for three weeks after the fluid has cleared and the symptoms have disappeared is the rule. Limitation of activity for an additional six weeks seems well.

From the standpoint of the long term management, as presented by Wolf, Goodall, and Wolff, it can be seen that if the patients with subarachnoid hemorrhage could be

treated safely and effectively by surgical procedures in the first two weeks, following the initial hemorrhage, the threat of a recurrent hemorrhage and death in approximately 70 per cent of all patients with subarachnoid hemorrhage, could be removed.

Wolf, Goodall, and Wolff, in their recent monograph dealing with the management of these cases have presented with great clarity a routine which plainly details the criteria management.

The syndrome of subarachnoid hemorrhage must be differentiated from a common form of cerebral hemorrhage called apoplexy; from hemorrhage arising from tumor of the brain, and from various forms of encephalitis.

REPORT OF CASES

Case number one: R. R., a 60 year old white man, was admitted to the hospital on April 27, 1945, conscious and complaining bitterly of low abdominal pain, radiating to the right flank and back, also, into inner aspects of right thigh and groin. Twelve hours previously he awakened with occipital headache radiating over the vertex; within eight hours there was a short period of unconsciousness which was mistaken for sleep by the family doctor, who had given him ½ gr. M.S. to relieve pain of "renal colic." Within one hour he regained consciousness but was unable to speak. Profuse sweating, chills, and projectile vomiting followed. Pain in the right flank, right lower abdomen, groin, and posterior aspect of right thigh accompanied by a feeling of numbness, and tingling in the entire right half of the trunk and upper and lower extremities. He was unable to void, though he had an urgency and sensation of a full bladder. For two hours, he subsequently had transient loss of consciousness at five to 10 minute intervals.

For one week prior to the onset he complained of occipital headache each morning with indefinite changes in vision. During the previous three to four months he had had nocturnal incontinence.

He was referred by the G.U. service, where complete renal studies had been carried out, no pathology being found. I saw him 24 hours after admission. B.P. 174/92; P. 80; R. 16. There was a definite flushing of the head and neck; obvious rigidity of neck with positive Kernig and mild opisthotonos. Cranial nerves were negative with the exception of pupils, which were round and regular and reacted to accomodation, but sluggish to light. No changes in optic disc were present, but there was a grade two arteriosclerosis. A harsh systolic murmur was heard over the entire precordial area, with left heart obviously enlarged. Abdomen and renal areas were free of any objective signs. Neurological examination was negative with the exception of above. No evidence of sensory or motor changes.

Lumbar puncture revealed a uniformly bloody fluid under 180 mm. water pressure, which did not clot on standing. Slight xanthrochromia of supernatant fluid. Repeated punctures found the fluid less bloody and more xanthrochromia of the supernatant fluid. Within 19 days fluid was clear with a slight xanthrochromic tint.

On admission, R.B.C., 4,450,000; 84 per cent Hq.; W.B.C., 7,350; with 75 per cent polys. Serology negative; urine revealed, 5-7/H.P.F., W.B.C. and two plus albumin.

H. J. J., white male, age 51, was admitted to the hospital on July 10, 1944, with the history that at 4:00 p.m. on July 9, 1944, while in the bathroom shampooing his hair, he was seized with a sudden pain in the entire lower abdomen. Pain was severe and constant, radiating into both flanks more on the right, also into the lumbar area and into the posterior aspect of both thighs. There was no radiation of pain into the groin or testicle, nor was there any urgency. Two hours after the onset, he vomited twice. Pain persisted for four hours and was relieved only after ¾ gr. of morphine. He was admitted on G.U. service with tentative impression of renal colic. At no time was there any headache or disturbances of consciousness.

Upon admission, B.P. 150/90; P. 80; T. 98; R. 14. Still bitterly complaining of low abdominal and lumbar pain. Abdomen was distended and the patient was unable to void. There was definite neck rigidity, bilaterally hyperactive deep reflexes. The following day complete G.U. examination revealed no renal pathology. I saw him in consultation four days after admission and found marked rigidity of the neck, positive Kernig, pupils were equal and reacted to light and accomodation. Fundi were negative, except for grade one arteriosclerosis. Cranial nerves functioned normally. The deep reflexes were still hyperactive but no pathologic reflexes were present. Localizing signs were absent. Lumbar puncture revealed a uniformly bloody fluid under 230 m.m. water pressure, which did not clot on standing; five cc. removed for study. Repeated lumbar punctures

revealed less blood with definite xanthrochromic supernatant fluid, as patient clinically improved.

On admission, R.B.C. 4,310,000; Hq. 84 per cent; W.B.C. 17,250; 85 per cent polys. Urine entirely negative. N.P.N. 40 mg. per cent and urine cultures were negative.

His progress in the hospital was uneventful. For 10 days he had intermittent incontinence and retention.

One of us (L. L.) had an opportunity to perform six necropsies on cases of fatal subarachnoid hemorrhage. An excerpt of the pathological diagnosis based on gross and microscopic findings follows:

Case 1. White male, 53 years old.

Necropsy diagnosis:

(1.) Intimal and medial arteriosclerosis of the basal cerebral arteries.

(2.) Arteriosclerotic aneurysm of the basilar artery with acute rupture.

(3.) Basal subarachnoid hemorrhage.

(4.) Essential hypertension.

(5.) Status post appendectomy (three days ante mortem for gangrenous appendicitis).

Case 2. White female, 27 years old.

Necropsy diagnosis:

(1.) Syphilitic arteritis and phlebitis of the basal cerebral arteries.

(2.) Syphilitic aneurysm of the basilar artery with acute rupture.

(3.) Basal subarachnoid hemorrhage.

(4.) Subacute syphilitic meningo-encephalitis.

Case 3. White male, 48 years old.

Necropsy diagnosis:

(1.) Intimal and medial arteriosclerosis of the basal cerebral arteries.

(2.) Arteriosclerotic aneurysm of the right middle cerebral artery, with acute rupture.

(3.) Subarachnoid and subdural hemorrhage.

(4.) Hemorrhage of the right temporal lobe.

(5.) Multiple hemorrhages of the pons.

(6.) Essential hypertension.

(7.) Coronary arteriosclerosis and myofibrosis.

Case 4. White male, 58 years old.

Necropsy diagnosis:

(1.) Congenital aneurysm of the left middle cerebral artery with acute rupture.

(2.) Hemorrhage of the left basal ganglia.

(3.) Subarachnoid hemorrhage.

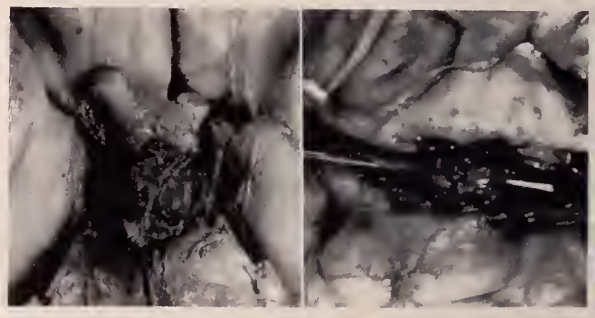


Fig. 1 *Fig. 2*

Fig. 1 shows syphilitic aneurysm of basilar artery. Case 2. Fig. 2 shows congenital aneurysm of left middle cerebral artery. Case 4.

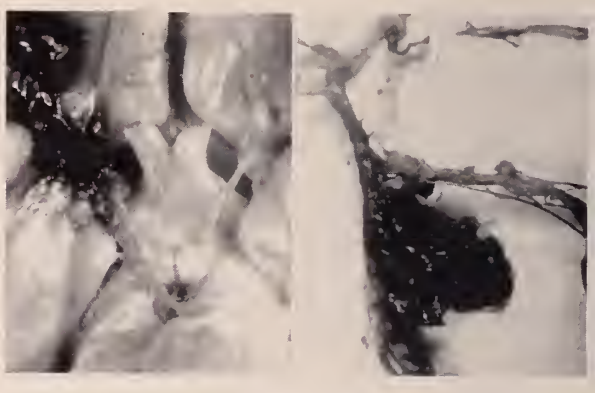


Fig. 3 *Fig. 4*

Fig. 3 shows arteriosclerotic aneurysm of right middle cerebral artery. Case 3. Fig. 4 shows close-up of aneurysm. Case 3.

Case 5. White male, 48 years old.

Necropsy diagnosis:

(1.) Syphilitic aortitis.

(2.) Syphilitic arteritis of the basal cerebral arteries.

(3.) Syphilitic aneurysm of the right middle cerebral artery with acute rupture.

(4.) Basal subarachnoid hemorrhage.

Case 6. White female, 53 years old.

Necropsy diagnosis:

(1.) Intimal and medial arteriosclerosis of the basal cerebral arteries.

(2.) Multiple arteriosclerotic aneurysms of the basal cerebral arteries with cherry-sized thrombosed aneurysm of the basilar artery and smaller aneurysms of both middle cerebral arteries.

(3.) Acute rupture of aneurysm of the right middle cerebral artery.

(4.) Subarachnoid hemorrhage.

(5.) Subdural hematoma over the right brain hemisphere.
(6.) Multiple hemorrhages of the pons.
(7.) Essential hypertension.

In each of these six cases of "spontaneous" subarachnoid hemorrhage an aneurysm of a basal brain artery was found.

In two out of six, or 33.33 per cent, syphilis was found to be the cause of the aneurysm. In both cases, spinal and blood Wassermann were positive. One case showed a typical luetic aortitis; the other case had a history of miscarriages and had been treated for syphilis. The brain arteries showed typical round cell-infiltration of the adventitia and media.

The percentage is indeed surprisingly high and very much at odds with the general belief that syphilis plays only an insignificant role in the etiology of intracranial aneurysms. This fact we dispute on the basis of this pathology.

In one out of six cases, or 16.67 per cent, the diagnosis was without reservations that of a congenital aneurysm.

In the remaining three cases, or 50 per cent, the diagnosis was that of an arteriosclerotic aneurysm, with the reservation that the arteriosclerosis was of somewhat peculiar type, involving not only the intima but also the media rather extensively. A coordinated congenital weakness of the media may have played a substantial role in these cases. All three cases had hypertension which may also have played an important role; hypertension was absent in the other three cases.

An aneurysm was found in the basilar artery three times; in the right middle cerebral artery three times and in the left middle cerebral artery two times. In one case multiple (four) aneurysms were found, one of which was perforated, whereas another showed evidence of previous perforation healed by thrombosis and scar tissue. All aneurysms were located at a point of division of cerebral arteries.

In three cases or 50 per cent trauma preceded the rupture. In two cases, operations, one for gangrenous appendicitis, one for nasal polyps preceded the hemorrhage by two to three days. No evidence of postoperative necrosis of vertebral arteries described elsewhere was found.

In several cases evidence was found of a sudden elevation of high blood pressure as the immediate cause for the aneurysm rupture. In three cases actual brain hemorrhages were found in addition to the subarchnoid hemorrhage. In two cases there were multiple hemorrhages in the pons. In one case the hemorrhage was located in the temporal lobe, in another case in the basal ganglia.

Extensive subdural hematoma was found in two cases, both times at the site of the ruptured aneurysm.

In two cases, histological evidence was found of a previous perforation of an aneurysm, healed by thrombosis within the sac and by scar tissue in its wall containing blood pigment. This observation fits well into the clinical experience that attacks of subarachnoid hemorrhage may be quite frequent,

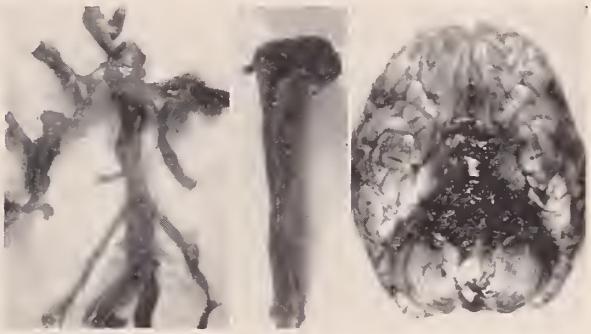


Fig. 5 *Fig. 6* *Fig. 7*

Fig. 5 shows syphilitic aneurysm of right middle cerebral artery. Case 5. Fig. 6 shows close-up of aneurysm. Case 5. Fig. 7 shows basal subarachnoid hemorrhage. Case 5.

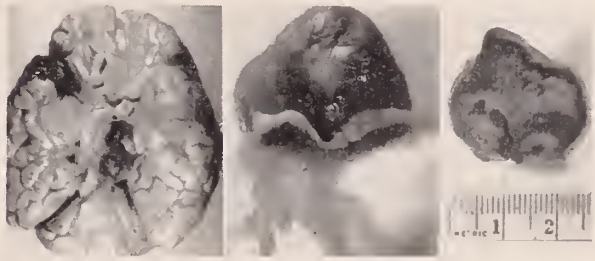


Fig. 8 *Fig. 9* *Fig. 10*

Fig. 8 shows unruptured thrombosed arteriosclerotic aneurysm of basilar and ruptured aneurysm of right middle cerebral artery. Case 6. Fig. 9 shows close-up of thrombosed aneurysm of basilar artery. Case 6. Fig. 10 shows cross-section through thrombosed aneurysm of basilar artery. Case 6.

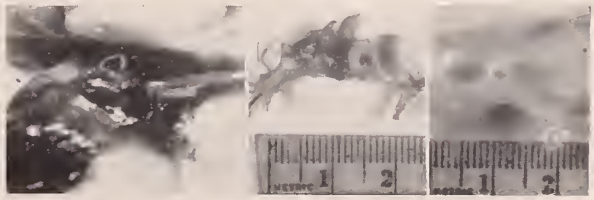


Fig. 11 *Fig. 12* *Fig. 13*

Fig. 11 is ruptured arteriosclerotic aneurysm of right middle cerebral artery. Case 6. Fig. 12 is close-up of ruptured and of unruptured aneurysm of right middle cerebral artery. Case 6. Fig. 13 is close-up of unruptured arteriosclerotic aneurysm of left middle cerebral artery. Case. 6.

although not often diagnosed, and that the direct mortality may not exceed 50 per cent. However, there is of course a marked tendency towards recurrent hemorrhages.

SUMMARY

Subarachnoid hemorrhage is a symptom and not a disease entity. In the vast majority, the hemorrhage is due to a rupture of an intracranial aneurysm, particularly of the circle of Wilis; with arteriosclerosis, septic or infectious embolism, trauma, massive cerebral hemorrhage, intra-ventricular hemorrhage, blood dyscrasias, vascular cerebral neoplasm, post operative focal necrosis of cerebral vessels, complication of encephalography, shock therapy, and artificial hyperpyrexia, contributing a small number of cases.

The syndrome is usually characterized by the sudden onset of headache; nuchal rigidity; mild Kernig sign; vomiting; various degrees of hyperemia of optic discs; involvement of one or several of the cranial nerves; frequent changes in pupillary reactions; mild leukocytosis; mild elevation of temperature; slow pulse and spinal fluid under pressure, uniformly bloody with an xanthrochromic supernatant fluid. Symptoms referrable to irritation of various nerve roots, particularly those making up the lumbosacral plexus, may be present. The onset is sudden. Treatment is directed toward relief of headache, reduction of intra-cranial pressure, allaying of excitement, adequate feeding. Later angiography and consideration of surgical measures in suitable cases of aneurysmal rupture, plus rehabilitation of the patient.

On the basis of these findings it has been recommended that those patients who come under observation during the four weeks after a subarachnoid hemorrhage be subjected to arteriography and subsequent craniotomy if an aneurysm is visualized.

Two cases of confirmed spontaneous subarachnoid hemorrhage in which the initial symptoms resembled Dietl's or renal crises are presented.

Six fatal cases of "spontaneous" basal subarachnoid hemorrhage are reported. All were caused by rupture of an aneurysm of a basal cerebral artery. The diagnosis of syphilitic aneurysm was made in two cases; that of a congenital aneurysm in one case; and that of arteriosclerotic aneurysm in three cases. We feel that syphilis plays a more important role than generally believed.

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MORE OPERATIONS FOR STOMACH CANCER; FEWER MORTALITIES

Over a 10 year period the percentage of operable cases of cancer of the stomach ranks second only to cardiovascular disease as the commonest cause of death in the United States, has steadily risen. During the same period the percentage of cases in which surgeons recommended gastric resection — involving the removal of part or all of the stomach — has also increased. At the same time, the mortality rates for operation have dropped remarkably.

These facts were revealed by David State, M.D., George Moore, M.D., and Owen H. Wangensteen, M.D., all members of the department of surgery of the University of Minnesota Medical School who report a 10 year survey of the results of surgical treatment of gastric cancer at the University of Minnesota hospitals.

GENERAL PRINCIPLES UNDERLYNG THE X-RAY DIAGNOSIS OF MEDIASTINAL TUMORS*

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Those of us who have studied the thoracic roentgenogram of a still-born baby are familiar with the fact that it does not permit any differentiation between mediastinal structures and lung fields. In other words it is the air content of the lung bordering on the mediastinum that affords us a possibility to observe the contour of the mediastinum and diagnose changes in its configuration.

The widening of the mediastinal shadow, i.e., the encroachment on the lung fields, is the fundamental roentgenological sign of mediastinal tumors. It has the same diagnostic validity for the roentgenologist as the combination of chest pain, cough, dyspnea, and cyanosis have for the clinician. In general only those tumors are demonstrable radiographically that either protrude themselves beyond the normal silhouette of the mediastinum or displace adjacent mediastinal organs such as the large vessels to such an extent that the latter protrude into the lung fields. Expressed negatively, it means that tumors, not of such size or location to border on the mediastinal pleura, will remain unrecognized unless they can be revealed by encroachment on the lumen of the trachea or esophagus.

Whenever the radiologist sees a widened mediastinal shadow he thinks first and foremost of a mediastinal tumor. Non-tumorous lesions such as aortic or pulmonary aneurysm, abnormal widening of the esophagus, tuberculous abscesses of the spine, and inflammatory exudates and abscesses of the mediastinum, which should be considered in the differential diagnosis, can be ruled out by auxiliary methods, e.g., contrast filling of the esophagus, overpenetrated Bucky films, by fluoroscopy with observation of pulsatory movement, by films in the lateral and oblique diameters, finally by bronchograms, kymograms, laminograms, and contrast filling of heart and aorta.

If we now enter into a discussion of the roentgen diagnosis of specific types of mediastinal tumors, we encounter an error that pervades most of the roentgenographic literature on this topic, even of the present day. Thus, we find the following statement in a paper by Pfahler on the roentgen diagnosis of mediastinal tumors: "The outline is sharp indicating benign tumor." This is incorrect to the extent that a sharp outline or contour in the case of a mediastinal tumor does not rule out malignancy. The misunderstanding is based on erroneous transference from the x-ray symptomatology of lung tumors to that of mediastinal tumors. For explanation of the fact that most malignant tumors of the mediastinum display a sharp and clear margin toward the lung field, we have to go back to the anatomy of the mediastinum. We know that the mediastinum is enclosed on both sides by mediastinal pleura, and any tumor, benign or malignant, will exhibit a sharp margin as long as it is covered by intact pleura. Only if it ruptures this membrane and penetrates through it into the lung field, will its sharp contour disappear.

Another diagnostic feature that is of such great help in the interpretation of lung films, namely the observation of the homogeneity of a shadow or its inhomogeneity, is of little use in the diagnosis of mediastinal tumors. While inflammatory lesions of the lungs, such as tuberculous and bronchopneumonic infiltrations, can usually be differentiated from lung tumors, and particularly benign lung tumors, by the blotchiness and inhomogeneous character of the inflammatory lesions, as contrasted against the even shadow of the benign tumor, inflammatory exudates and abscesses in the mediastinum and infectious

*Presented before the 16th Annual Fall Conference of the Oklahoma City Clinical Society, October 31, 1946.

glandular swellings may cause as homogeneous a shadow in the mediastinum as any tumor. This is well exemplified by the homogeneous nature of a tubercular abscess of the spine which closely imitates a mediastinal tumor until the overexposed film demonstrates the destruction of the bone. Only rarely will calcification or bone formation reveal the histological type of a tumor, such as the calcified shells of dermoids and echinococcus cysts, or the presence of bony shadows or teeth in teratoma. But marginal calcifications are present not only in cysts but also in aortic aneurysms. The observation of such calcification, not only in the questionable bulging shadow, but also in the rest of the aorta will facilitate the diagnosis of an aneurysm.

So far we have seen that such roentgen signs as sharpness of contour and homogeneity of the tumor shadow are of limited diagnostic validity in the diagnosis of mediastinal lesions; the same holds true for the size of the shadow and its intensity. Size and density of the tumor shadow are rather irrelevant, since any tumor, benign or malignant may be small or large, and when of large extent in a direction vertical to the film, it will absorb more rays and therefore be denser.

But there remain some other features related to the fundamental pathology of mediastinal tumors that are of great diagnostic significance, namely their configuration, position in the mediastinum, and displacement of adjacent organs. Also to be taken into account are dynamic phenomena of movement of the mediastinal enlargement and its margins under the influence of physiological changes such as pulsation and respiration, swallowing and coughing, and finally the observation of the growth tendencies of the tumor over a period of time and its reaction to irradiation.

The contours of a mediastinal tumor may be straight or curved. In the latter case the margins may be polycyclic, i.e., consisting of several arcs, or monocyclic, represented by a single curve. The straight margin of a mediastinal dilatation is found mainly in inflammatory processes such as exudates, or as a sign of massive adhesions such as take place after irradiation of glandular tumors responsive to x-ray treatment. A straight laterally ascending contour is also found when the tumor itself is not marginal, but displaces the superior vena cava or innominate veins toward the lung fields, as frequently exemplified by substernal goiters and thymus hyperplasia, and occasionally by other tumors. A scalloped multilobular contour is almost pathognomonic for glandular tumors such as hyperplastic tuberculosis of the lymph nodes, lymphoblastoma, lymphogranulomatous, leukaemic and metastatic involvement of mediastinal glands, which only rarely show a monocyclic enlargement. The only other mediastinal tumors besides the glandular that may display a polycyclic demarcation, are the rare multilocular malignancies of the thymus and occasionally aortic aneurysms with daughter aneurysms. A single arch on either side forms the boundary of most other tumors, benign and malignant, such as those derived from the thyroid and most of those of the thymus, mediastinal cysts, dermoids, teratomas, and the tumors originating from nervous tissue such as ganglioneuromas.

Of some diagnostic help may also be the relative symmetry or asymmetry of the mediastinal enlargement. Systemic diseases of the lymph glands such as leukaemias, lymphogranulomatosis, and general metastasis will affect both sides of the mediastinal glandular chain. Bilateral involvement of the mediastinum is also noted in mediastinal tumors arising from unpaired centrally located structures such as tumors derived from the thymus. In contrast to these are tumors originating on one side of a paired structure such as one lobe of the thyroid, the sympathetic chain, the vagus or hourglass tumors of the spinal cord, which usually or at least in the beginning cause a unilateral mediastinal enlargement.

The position of a mediastinal tumor can be used as an important identifying characteristic. Tumors occurring in the anterior mediastinum are retrosternal goiters, dermoids and teratomas, pericardial tumors, benign or malignant thymomas; aneurysms of the ascending aorta, of the aortic arch and the innominate artery also deserve mention. Widening of the posterior mediastinum speaks for ganglioneuroma, hourglass tumors of the cord, neurosarcoma, tuberculous or other abscesses of the spine, aneurysms of the descending aorta and idiopathic enlargement of the oesophagus, to name only the more important.

The factor of displacement of trachea and oesophagus is of great diagnostic importance particularly in the differentiation of benign and malignant tumors. Both of these frequently displace adjacent organs, but in

malignant, infiltratively growing tumors the displacement is disproportionally small in relation to the size of the tumor, since the invasion of the wall of the adjacent organ by the malignancy will anchor this organ and prevent extensive shift. On the other hand maximal displacement is found in slowly growing benign tumors such as retrosternal goiters and benign cysts.

The dynamic diagnostic phenomena of pulsatory and respiratory movements of a tumor and its participation in the act of swallowing and coughing are also diagnostically significant. Rise on swallowing is important in the diagnosis of a retrosternal goiter. Observation of pulsatory phenomena in a mediastinal tumor, particularly by means of kymograms, furnishes valuable information, although, as we know, transmitted pulsation may be displayed by a tumor and may be absent or minimal in an aneurysm partially occluded by blood clots.

Serial observations extending over greater time intervals are of course of invaluable help, since they serve to determine the growth tendency of a tumor and its malignant or benign character. Yet even benign tumors such as dermoids or teratomas may grow quite noticeably during a period of several years. But serial studies over larger periods may be frowned upon in this age of exploratory mediastinotomies.

As a final point I should like to call attention to the diagnostic validity of therapeutic x-ray radiations which is similar to the diagnostic usefulness of the radiation test in bone tumors. With the exception of the thymus hyperplasia in the child and the lymphosarcoma of the thymus, the only mediastinal tumors that respond to x-ray treatment are the tumors that arise from or involve the lymph nodes. Here the most responsive is the lymphoblastoma that frequently melts as speedily under the radiation treatment as it is apt to recur soon after. Next in sensitivity follow previously untreated leukaemic tumors; somewhat slower in their response are the lymph glands of Hodgkin's disease. Very slow in their reaction are tuberculous nodes, radiation of which may cause febrile spiking. Practically no response is characteristic for metastatic glandular involvement unless the primary tumor is particularly radiosensitive such as the seminoma of the testis or the Ewing tumor. Benign tumors and cysts of the mediastinum, and thymic tumors with the exception of the lymphosarcoma of this gland and the benign hyperplasia in the child, do not react to x-ray treatment.

In closing, acknowledgment is made to publications of the Viennese school particularly those by Lenk, and to a monograph by Heuer and Andrus of Cornell for diagnostic points and observations of this paper.

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(Continued on Page 474)

The Use of Dolophine (Dimenthylamino heptanone-Methadon) In the Control of Pain in Bone and Joint Disorders*

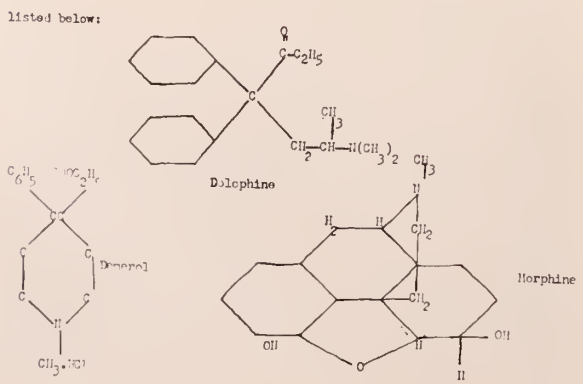
WILLIAM K. ISHMAEL, M.D. AND JOHN R. STACY, M.D.*

OKLAHOMA CITY, OKLAHOMA

1. Introduction and review of the existing data and literature.

The control of pain in bone and joint disorders has always been a serious problem. The tendency for chronicity of the diseases and injuries of the skeletal system and the ever present danger of addiction prevents most of us from adequately relieving the pain in these patients. Consequently, the appearance of a drug which promises to be effective in controlling pain and yet not subject to side effects or marked addiction, would be welcomed by all of us.

Following the war, our occupation forces in Germany found the analgesic formula of six dimethylamino-four, four-diphenyl-threeheptanone as shown in the following figure; listed by the German number 10820. Knowledge of this compound was actually made available as a result of the investigation by a group, Technical Industrial Intelligence Committee under the Foreign Economics Administration, U. S. Department of State. Their report is published and is now available at the office of the publication board, Department of Commerce, Washington, D. C., report No. 981. The structural formula of this compound along with that of morphine and Demarol are listed below:



The Eli Lilly and Company chose to investigate this drug and it was first reported on by Scott and Chen[1] in May, 1946. They named the substance Dolophine. In Germany the drug had been known as Amidon. They reported favorably on the properties of the drug and found no evidence of its being habit-forming, but warned against indiscriminate use until further studies were reported. In their studies they found good analgesia with mild sedation and few side actions. Large doses depressed respiration but there was a very wide margin of safety between effective clinical and toxic doses. No tolerance nor addiction was reported and there were no withdrawal symptoms in animals receiving the drug over relatively long periods. Methadon has been selected by the food and drug administration as the official name for this compound. The term Amidon is to be discarded.

Later, Kirchhof and David[2] reported on the drug and found it to be an effective analgesia in post-operative states with comparatively few undesirable side effects. They found little sedative or hypnotic effect and stated that their nurses reported that after the pain was relieved, the patients were frequently sleepless. These workers used doses ranging from five mg. to 10 mg. given subcutaneously to 84 patients for a total of 480 administrations.

Scott and Chen summarized their findings as follows:

"In rats, dogs, and man, Dolophine possesses marked analgesic action, being at least equal to morphine and several times more potent than Demerol. In many respects this substance is closely similar to morphine.

*The University of Oklahoma School of Medicine and McBride Clinic, Oklahoma City, Oklahoma. (**This drug, Dolophine (Methadon, Lilly) was furnished by the Eli Lilly and Company of Indianapolis, Ind.)

However, qualitative differences between the effects of morphine and this heptanone derivative have been noted. Apparently there is little or no tolerence development in the analgesic action of 10820 (Dolophine-Amidon- in dogs. Side reactions in human beings do not appear to be excessive. Clinical results so far substantiate the laboratory data."

2. The investigation reports the effectiveness of this analgesic in 106 orthopedic and arthritic patients seen at the Oklahoma State University Hospital and the McBride Clinic, Oklahoma City, Oklahoma. They represent the first group of a 300 patient series. In most instances the drug was used for a few days only as a palliative measure because we were anxious to obtain as much information as possible on the widest variety of disorders, the supply of the drug being somewhat limited. When possible we alternated the use of Dolophine with morphine, codein, pantapon, papaverine, and other analgesics to obtain comparative data. The patients were informed that the drug was new, that we found it quite effective and as far as we could ascertain had no habit forming qualities.

The dosage was 2.5 mg. to be used orally every four to eight hours as needed. This dose was needed as frequently as every two hours in a few cases and as infrequently as every 24 hours. A few instances of hypodermic use are included, this being given in doses of 7.75 mg. Most patients reported that relief was felt in from 20 to 30 minutes and lasted from six to 12 hours. Much more information will be obtained from review of the hospital cases using the parental route and dosage. We will also have more information to present sometime in the future on a much larger group of bone and joint disorders.

Dolophine was used in the control of pain in 22 types of disorders as listed below:

1.	Sciatica	16
2.	Rheumatoid arthritis	14
3.	Periarthritis of the shoulder and upper extremity causalgia (shoulder-hand syndrome)	11
4.	Osteoarthritis	20
5.	Carcinomatosis	3
6.	Acute wounds and bruises	1
7.	Acute fractures	4
8.	Myositis, acute	1
9.	Rheumatoid spondylitis	3
10.	Spondylolisthesis	3
11.	Herpes zoster	2
12.	Sudeck's atrophy	1
13.	Osteomalicia — senile type	4
14.	Acute lumbo sacral strain	5
15.	Fibrositis	3
16.	Post-operative arthrotomies	2
17.	Buerger's disease	2
18.	Hypertensive headaches	1
19.	Traumatic acromioclavicular separation	1
20.	Polyneuritis	1
21.	Osteomyelitis	1
22.	Coxa malum senilis of the hip	1

We were impressed very early in our experience that the drug was quite effective in the control of nerve root pain resulting from herniated intervertebral discs. Consequently, this type of pain heads the list of disorders. Table II lists the side effects reported by the patients. This is as follows:

1.	Vomiting	1
2.	Nausea	14
3.	Constipation	2
4.	Palpitation	1
5.	Feeling of well being (Euphoria) (Possible sign of addiction)	1
6.	Fullness in head	1
7.	Headache	1
8.	Vertigo	4
9.	Ringing in ears	1
10.	Sombulent effects	1
11.	Weakness	1
12.	Tingling of extremities	1
13.	Anorexia	1

Many of the patients were in poor physical condition and probably had a poor level of tolerance to any type of medication. A large number of arthritic patients were taking several other types of medication. Nausea was found to be the most frequent case, vertigo falling second. Only seven patients were unable to tolerate the drug because of the side effects.

The types of disorders represented in patients reporting no relief of pain are listed below. (The dose of 2.5 mg. every four hours was not exceeded in this group.)

1.	Fibrositis	1
2.	Herniated discs	4
3.	Causalgia of chest wall	1
4.	Herpes zoster	1
5.	Buerger's disease	1
6.	Intraspinal lesion	1
7.	Causalgia of shoulder and hand	1
8.	Neuralgia	1
9.	Osteomyelitis	1
10.	Osteoarthritis	3
11.	Periarthritis of the shoulder	1

12.	Rheumatoid arthritis	1
13.	Subdeltoid bursitis	1

Our conclusion from the list suggests that the type of disorder has less to do with the efficacy of the analgesic than does the individual constitutional make-up. Many more patients and types of disorders must be studied before any definite conclusions can be arrived at regarding the specificity of the drug.

There were seven cases in the series who tolerated Dolophine who could not tolerate morphine or codein. Fifteen individuals stated that they obtained more relief from 2.5 mg. of Dolophine than they got from the average dosage of morphine or codein. Included in the group of patients were three morphine addicts. Dolophine was used repeatedly on these patients with no evidence of craving but with little relief of their complaints as compared to the use of morphine in adequate dosage to relieve them. The results of the rather extensive investigation carried out in the United States Public Service Hospital at Lexington, Kentucky, revealed that Dolophine can be substituted for morphine in experienced addicts. Although the abrupt withdrawal of the synthetic analgesic was not followed by the abstinence syndrome, nevertheless when Dolophine was administered to post-morphine addicts over a period of several months, they exhibited signs of emotional and psychic dependence. These results have been reported by Dr. Isbell at the meeting of the Society for Pharmacology and Exp. Therapeutics in Chicago in May, 1947. According to the definitions given by Himmelsbach, supplement No. 138 to Public Health Reports, 1938, page 115, Dolophine possesses the property of habituation.

The efficacy of the drug in relieving pain was based entirely upon the patient's estimation. They were frequently asked what percentage of the pain they considered alleviated. Seven classifications are made as shown in the following table:

1.	Complete relief more than four hours — grade five	25
2.	Nearly complete relief — grade four	25
3.	Good relief — grade three	14
4.	Fair relief — grade two	10
5.	Little relief — grade one	8
6.	No relief — grade 0	18
7.	Could not tolerate	6

We were impressed with the duration of the analgesia. Most of the patients with nerve root pain of discogenic nature were controlled preoperatively and it is our policy to await operation until the patient himself asks for radical measures. This suggests the degree of pain he suffers. Nurses attending the patients receiving Dolophine reported that the patients universally refused the drug as soon as the pain was relieved.

Tables V to IX list the disorders with the pain controlled by Dolophine. Each table is listed in order of efficacy of consistent results. It is to be noted that the discogenic syndrome heads the list. Here again there is no suggestion of any specificity of the drug.

Table V is as follows:

Grade V — complete relief.

1.	Rheumatoid arthritis	3
2.	Carcinomatosis	2
3.	Sciatica	9
4.	Degenerative arthritis	4
5.	Acute myofascitis	1
6.	Post-operative arthrotomy	1
7.	Shoulder-hand causalgia	2
8.	Myositis	2
9.	Polyneuritis	1

Table VI as follows: Grade IV — nearly complete relief.

1.	Hypertensive headache	1
2.	Discogenic root pain	5
3.	Shoulder-hand causalgia	5
4.	Osteoarthritis	2
5.	Fractured femur, pre- and post-operative	1
6.	Acute traumatic acromioclavicular separation	1
7.	Rheumatoid arthritis	6
8.	Carcinomatosis	1
9.	Buerger's disease	1
10.	Acute lumbo-sacral strain	2

Table VII as follows: Grade III — "good" relief.

1.	Deltoid bursitis	1
2.	Discogenic root pain	2
3.	Degenerative arthritis	6
4.	Senile osteomalacia	1
5.	Acute fracture of the acetabulum	1
6.	Causalgia of the arm	1
7.	Neuritis	1
8.	Marie Strumpell's disease	1

Table VIII as follows: Grade II — fair relief.

1.	Post-operative arthrotomy	1
2.	Post-fracture causalgia	1
3.	Spondylolisthesis	1
4.	Rheumatoid arthritis	2
5.	Osteoarthritis	2

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CLINICAL PATHOLOGIC CONFERENCE

The School of Medicine of the University of Oklahoma

Presented by the Departments of Pathology and Medicine

HOWARD C. HOPPS, M.D. AND PHILIP M. MCNEILL, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HOPPS: Our case of this morning presents a very interesting story from the standpoint of clinico-pathologic correlation. It does not represent a rare condition, but rather one which is of great importance because of its frequency. Our problem then is primarily one which concerns pathogenesis and an evaluation of those events which finally led to the demise of this patient. Fortunately, we have Dr. McNeill to analyze the clinical aspects of this case.

PROTOCOL

Patient: I.B.S., white female, age 65, admitted December 30, 1946; Died January 22, 1947.

Chief Complaint: Severe precordial pain; "smothering."

Present Illness: In May 1945, this patient was hospitalized at another hospital and treated for what she was told was a "coronary occlusion." At that time it was also discovered that she had diabetes, and this was treated by diet and 35 units of protamine zinc insulin daily. Similar treatment was continued at the diabetic clinic at University Hospitals beginning in June 1945. In July, 1945, she was seen in the medical clinic because of piercing pains originating in the left lateral cervical region and radiating into the left arm and hand, out to the fingers. These attacks occurred, on the average, once a day, and lasted from 15 seconds to seven minutes. There was no associated precordial or substernal pain, and precipitating factors were not mentioned. Following treatment with nicotinic acid, 50 mg. t.i.d., and nitroglycerine, gr. 1/100 p.r.n., she stated that the latter would relieve the pain but the frequency of attacks was not altered. Her condition continued about the same, and on November 2, 1945, an electrocardiogram was interpreted as: "1) heart in the semi-horizontal position, 2) normal E.C.G." At some time during this year the attacks of pain in the left neck, arm, and hand began to be accompanied by precordial pain. When seen in June, 1946, she was complaining, in addition to pain as previously described, of morning frontal headache, tense feeling in her legs at night, "noisy sound" in her ears, and occasional transitory dimness of vision. Her B.P. at this time was 176/104. During this time her diabetes was poorly controlled; she did not follow her prescribed diet regularly. The attacks of pain decreased somewhat in frequency, but in the latter part of December 1946, coincident with the onset of colder weather, they again became more frequent, but were relieved by amyl nitrite. On December 28, 1946, she developed diarrhea — eight or nine stools daily. The stools were soft, not watery, and contained no pus or blood. There is no mention of abdominal pain. About 1:30 a.m. on December 30, 1946, she began to have a heavy sensation in the precordial area which soon progressed to severe pain radiating into the neck and left forearm. Two amyl nitrite ampules failed to bring relief. She was brought to the hospital at 11:30 a.m., still suffering from severe pain. This was largely relieved by morphine, gr. 1/6 and nitroglycerine gr. 1/150.

Past History: At age 34 she suffered from "gallbladder trouble" for three years (the details of this are lacking). In February, 1945, she suffered from diarrhea and a diagnosis of typhoid fever was suggested but not confirmed, (no diagnostic procedures were carried out). Since then there have been three or four episodes of diarrhea, each lasting about two days.

Family History: Father died at age 70 of a "heart attack." Mother died at age 81 from a "stroke." There is no family history of diabetes.

Physical Examination: This obese white

female was able to lie flat in bed without evident respiratory difficulty. She complained of slight precordial pain, even after repeated injections of morphine. The skin was pale with a tint of cyanosis of the upper chest. Heart sounds were faint and regular and no murmurs were heard. The apical and radial rates were the same, 120. B.P. was 128/86 bilaterally. The arteries were compressible. No rales were heard in either lung base. No abdominal viscera or abnormal masses were palpable. There was no edema of the lower extremities or sacrum.

Laboratory Data: The urine contained a trace of albumin, 3+ glucose, 15 to 20 white blood cells per high power field and occasional granular casts, (voided specimen). There was slight anemia and a leukocytosis of 14,450 with 78 per cent neutrophils. Fasting blood sugar, the day after admission was 266 mg. per cent. Mazzini test of the blood was negative on two occasions. An electrocardiogram on the day of admission was interpreted as "changes suggestive of recent anteroseptal ischemia (infarction)." The interpreter suggested that the curve be repeated in a day or two for final decision. This was done and subsequent curves established a definite diagnosis of myocardial infarction.

Clinical Course: The patient received a liquid diabetic diet of 1500 calories and it was necessary to increase her insulin considerably to control the diabetes. She received morphine, papaverine, nasal oxygen, and aminophylline. On the day after admission she again complained of very severe precordial pain, but no further physical changes could be noted. Throughout the next few days the patient seemed to improve but continued to feel quite tired. There was another episode of severe precordial pain on January 5, followed again by improvement. Her temperature ranged between 100 and 101 the first week but now went down to a near normal range. By January 17, increasing dyspnea was present and there were moist rales in the right lung base. N.P.N. was 42.9 mg. per cent and B.U.N. 14.8 mg. per cent. Intravenous salyrgan was given with little effect. By January 20, moist rales could be heard in both lung bases and the liver extended two or three finger breadths below the right costal margin. Pretibial edema appeared in the right leg, later in the left leg. She was then given digitaline nativelle intravenously but without apparent improvement. The pulse rate had varied between 90 and 120, but on January 21, was up to 140. The respiratory rate increased and the heart sounds were "tic-tac" in quality. Digitalization was continued in an attempt to bring about some degree of cardiac compensation, but the patient expired at 2:00 a.m. on January 22, 1947.

CLINICAL DIAGNOSIS

DR. MCNEILL: A presentation of this nature puts the initial speaker at a great disadvantage. It is much less hazardous to contemplate and discuss a diagnostic problem of this sort if the pathologist is not to follow you and describe in detail the true nature of the case. From this patient's symptoms and the several signs which have been described, one would be inclined to accept a diagnosis of *diabetes mellitus*. There are other conditions which may or may not be associated. It is possible that these may so fit together as to suggest an etiology for the diabetes and considerably alter our ideas of the case. In the past history, it is recounted that the patient had gallbladder trouble for three or four years at the age of 34. About two and a half years ago (February, 1945), she suffered from diarrhea and a diagnosis of typhoid fever was suggested, but not confirmed. Since then there have been several episodes of diarrhea, each lasting about two days. Is it possible to correlate these things with hyperglycemia? Yes, these could all be explained on the basis of pancreatitis. *Chronic pancreatitis* is a disease which is frequently associated with chronic gallbladder disease. It may be of two types: either interlobular or interacinar. The latter type is very frequently associated with diabetes mellitus since the interstitial fibrosis involves the islands of Langerhans and directly interferes with production of insulin. Arteriosclerosis, endarteritis, and syphilis have also been responsible for chronic pancreatitis and diabetes mellitus. The pathologists, Dr. Hopps or Dr. Halpert, know far more about this than I, and I hope that one of them will discuss the etiology and pathogenesis of chronic pancreatitis. Actually, however, symptoms of chronic pancreatitis are entirely lacking in this patient. There is no history of epigastric pain, bloating, belching, diarrhea, irregular jaundice with fever, or changes in the stools which would suggest deficiency in proteolytic or lipolytic enzymes.

In considering the acute episodes of pain from which this patient complained, *acute pancreatitis* came to mind only to be discarded. *Cholecystitis with cholelithiasis* must also be mentioned, but characteristic symptoms are not present.

Could these attacks of severe pain be related to diabetes mellitus? The patient describes her pain as piercing, and radiating into the neck and left forearm. If this were a manifestation of *diabetic neuritis* the pain would last longer and there would be some residual tenderness. On the other hand it may be vascular in origin. *Arteriosclerosis* is so commonly associated with diabetes as to warrant mention in the definition of the disease. Pain of vascular origin is ordinarily relieved by nitroglycerine, but the frequency of attacks is not relieved by nitroglycerin. This precisely fits the story which this patient gave. In mentioning the precordial pain it would be of interest to know whether this occurred after a large meal, in relation to overeating, or exercise. At this point, many of you are thinking of E. C. G. changes. The electrocardiograph is a good instrument but has not yet replaced the clinical history and physical findings as the most important bases for diagnosis. This patient had an elevated blood pressure, 176/104. From a statistical viewpoint, this strengthens our diagnosis of angina pectoris since this disease is more common in hypertensives. It was a particularly severe and persistent pain of this sort which brought the patient to the hospital. This was largely relieved by morphine and nitroglycerine. From the story, I would postulate that the coronary sclerosis, formerly responsible for transient anoxia and pain, had now progressed so that *cardiac infarction* developed. The skin was pale with a tint of cyanosis in the upper chest. Heart sounds were faint and regular, and no murmurs were heard. The apical and radial rates were the same. Blood pressure was 128/86 bilaterally. The arteries were compressible but no rales were heard in either lung. She complained of some pain at that time, but there was no evidence of any decompensation. There was slight anemia and a leukocytosis. An E.C.G. showed changes suggestive of infarction. This was diagnostic of myocardial infarction and the patient was treated in the conventional manner with morphine, papaverine, nasal oxygen, and aminophylline. Soon she began to have precordial pain again and this was followed by still another episode of severe precordial pain on January 5. The terminal event was one of progressive heart failure with engorgement of the liver, increasing dyspnea and moist rales in both lung bases, etc.

In summary I believe that this patient had hyperglycemia from diabetes mellitus or chronic pancreatitis and that this was a causative factor in arteriosclerosis or hypertension, coronary occlusion and myocardial infarction. There may also have been infarcts in the lung. Certainly the patient had passive congestion of lungs and liver and we would expect also to find cholecystitis and cholelithiasis, probably mixed gallstones.

ANATOMIC DIAGNOSIS

DR. HOPPS: Because we are concerned here principally with clinico-pathologic *correlation*, I believe I will alter the usual procedure in this case and read the final anatomic diagnosis first. This is:

Diabetes mellitus (clinical diagnosis)
Atherosclerosis, generalized, involving especially coronary arteries, the aorta and its major branches
Thrombosis of coronary arteries, recent and old
Infarction of the heart, recent and old, with myomalacia, myofibrosis, pericarditis, and mural thrombi of right and left ventricles
Hypertrophy and dilatation of right and left ventricles
Chronic passive congestion of lungs and liver
Infarct of left upper lobe of lung, recent
Pleural effusion, bilateral
Arteriolonephrosclerosis (benign)
Glycogen storage of liver and kidneys
Primary tuberculosis complex, right—old, inactive
Cholecystitis and cholelithiasis, (mixed stones), chronic
Diverticulosis of large bowel and appendix
Meckel's diverticulum
Fibroma of ovary
Leiomyomata of uterus, subserous, intramural and submucous
Chronic cervicitis with retention cysts
Obesity

This then is essentially a repetition of what Dr. McNeill gave in his summary save for several incidental and clinically insignificant findings. I think that Dr. McNeill is to be congratulated for an excellent analysis and for his critical diagnostic summary.

To answer specifically some of the questions which Dr. McNeill raised, let us first consider the question of chronic pancreatitis. This patient did not have pancreatitis, either chronic or acute. I believe that the significance of this entity has been greatly overemphasized in recent years. Frequently we find, at autopsy, a pancreas of decreased size which exhibits considerable atrophy of aci-

nar tissue and interstitial fibrosis. Rarely in these cases has there been any signs or symptoms during life to suggest deficiency of acinar function. Islets of Langerhans are even less apt to be affected since they are more resistant to injury and are so arranged as not to be seriously damaged from obstruction of pancreatic ducts. The most important causes of chronic pancreatitis are: (1) repeated episodes of acute pancreatitis with progressive destruction of pancreatic tissue and replacement fibrosis; (2) obstruction of the pancreatic ducts by calculi, or tumor with marked destruction of acini — islets remain. I believe that before one makes a positive diagnosis of chronic pancreatitis, he should demonstrate a deficiency of proteolytic and lipolytic enzymes by determining, from stool analysis, that there is but partial digestion of protein and fat. There is no question but that this condition does occur and that sometimes it is associated with deficient production of insulin, but I believe that it is a rare disease. Turning to this patient again, her pancreas weighed 75 grams, which is within normal limits, and appeared grossly normal. Sections were taken from the head, body and tail for microscopic study since we were aware of this diabetic state and were anxious to determine any changes which might correlate with this. As is frequently the case, there was nothing very remarkable seen. Although degenerative changes are often seen involving islets in diabetes mellitus, one does not rely upon such changes for his diagnosis.

Of major interest in this case is the cardiovascular system. The heart weighed 650 grams whereas the normal for this woman would have been about 330 grams. This degree of hypertrophy (predominantly left ventricle) without valvular defects or other obvious mechanical cause, is morphologic evidence for hypertension. The parietal pericardium was adherent over a small area to the anterolateral surface of the left ventricle, and the mycardium below this was rather soft and discolored brick-red. Multiple sections disclosed this to be an infarct which extended from a point 1½ cm. above the apex nearly to the base. Laterally, this region of necrosis extended about half way around the left ventricle and, in addition, involved the anterior half of the interventricular septum and the adjacent portion of right ventricle. There was mural thrombosis of *both* ventricles because of this. The source of the embolus (right ventricle) which caused the pulmonic infarct was thus explained. Within this large infarct there was represented various stages of necrosis and repair so that the infarct must have occurred in stages and this would correspond to the clinical story. One area was rather firm and included considerable new fibrous tissue. This was in contrast to a region of marked myomalacia in which some hemorrhage was still evident. Between these two was a transitional zone. This patient was one of those whose pattern of coronary artery distribution favored extensive damage following obstruction of the anterior descending branch. Two points of complete occlusion were found in the left coronary artery and this was in addition to a rather marked degree of atherosclerosis. The more recent thrombus was within the anterior descending branch at a point 6 cm. from its origin. An older (pale, partly organizing) thrombus obstructed the circumflex branch at a point 4 cm. from its origin. The age and distribution of the infarct corresponded to these points of occlusion. The rapidly progressive cardiac failure observed clinically is readily explained upon the basis of the extensive cardiac damage just described. It was reflected in the marked passive congestion which we observed in the lungs, liver, spleen and kidneys. Kidneys were slightly enlarged because of passive congestion. Microscopic examination disclosed, in addition to congestion, hyperplastic arteriolosclerosis as a manifestation of hypertension. This, with slight interstitial and interglomerular fibrosis justified the diagnosis of arteriolonephrosclerosis. There was no evidence of intercapillary glomerulosclerosis so that there is no possibility that hypertension was on this basis.

It appears to me that the point most to be emphasized in this case is that diabetes mellitus can exist for a long period of time in a patient without serious consequences related directly to insulin deficiency, but that the *atherosclerosis* which is frequently so marked in these individuals is a condition which cannot be overcome by insulin, diet or other measures of which we now know. As this case illustrates, it is often the atherosclerosis which is responsible for death, leading to thrombosis of coronary arteries, a "stroke" or perhaps gangrene of the leg.

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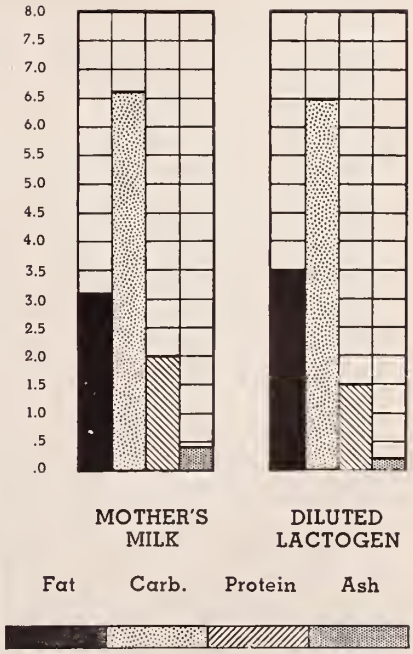
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Clinical Pediatrics, p. 156.



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President's Page

The luster of this ceremony, so far as my participation is concerned, is dimmed only by my feeling of inadequacy and I cannot do justice to an occasion so solemn, so full of high hope, so full of inspiration.

It has been said, "There is but one temple in the world, and that is the body of man. Nothing is holier than this high form. We touch heaven when we lay our hand on a human body."

I doubt seriously that members of any profession sense that great truth more than do Doctors of Medicine, whose very lives are consecrated to the preservation of health from conception until that last faint breath is drawn.

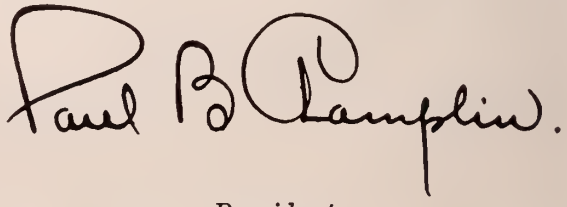
We are constantly looking, searching — yes, even begging for answers which so far have eluded the world, but, at the risk of alibi or excuse, I say there is a limit to what we in the active practice of medicine can accomplish. The demands upon our time are so great that research, experiment, and discovery are necessarily limited, yes, granting even that we had the scientific ability.

Inspiration is the basis of every great contribution in the fields of learning and achievement — it is the spark without which no great achievement is even possible. I can think of no achievement in any field that could give greater satisfaction than a new discovery for the prevention or relief of physical suffering.

Today's very ceremony is the result of inspiration, and surely the Oklahoma Medical Research Foundation will be the source of tremendous inspiration to our medical school, to our profession, to the public, and, if it produces but one treatment that would serve to save as many lives or lessen as much illness as any one of numerous treatments I might mention, then the cost of its creation and maintenance fades into insignificance.

It is my great fortune to say these words on behalf of the Oklahoma State Medical Association and, in its name and on its behalf, I pledge complete cooperation of the association as such, and, I am positive, of every member thereof. Our desire to assist financially is known, and our desire to assist by work, by study, and by cooperation is even greater. This can, by our united effort, become a famous institution.

It is a privilege to give you this, our pledge.



President.



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RESEARCH FOUNDATION CEREMONIES HELD

Groups Pledge Support In Site Dedication

Representatives from the doctors of medicine, the dental profession, the pharmacists, the press, and the public gathered in Oklahoma City October 3 for the first public participation in ceremonies presenting and dedicating the site of the Oklahoma Medical Research Foundation.

The afternoon outdoor ceremonies were set aside to observe the official acceptance of land donated by the state adjacent to the Oklahoma University School of Medicine as the site of the foundation.

In presenting the deed to the foundation's new president, who is J. G. Puterbaugh, McAlester, state board of affairs chairman W. R. Borgman said, "Strides made in medical science in the past 50 years will be outclassed and outmoded in the next 50 years."

Puterbaugh's response reviewed the progress of the foundation from 1944 when it was only a dream in the minds of a handful of doctors to the near-reality it is today. He said the year 1948 may "see the actual construction of the building when the institution will become a living, pulsing source of knowledge."

Gov. Roy J. Turner was also present for the presentation ceremonies of Oklahoma's only real scientific laboratory for the battle against human disease.

Pledging support of the groups they represented were: Paul Champlin, M.D., Enid, president of the Oklahoma State Medical Association; Fred C. Seids, D.D.S., Perry, Oklahoma Dental Association; C. J. Masterson,



Oklahoma City, Oklahoma Pharmaceutical Association; O. H. Lachenmeyer, Cushing, Oklahoma Press Association; and W. Lee Woodward, Alva, the lay public.

Horace Falls, president of the Oklahoma Variety Club, presented a check of $100,000 as the first installment on a gift of $600,000 from the theater group. The international president of Variety Club, Mr. McCraw, also spoke briefly.

Another formal gift presentation during the afternoon was from Mrs. George Marlow, Shawnee, whose memorial to her late son, Miles, is a $26,000 donation to the foundation.

At a meeting of the board of directors of the foundation earlier in the day, the following officers were elected: J. G. Puterbaugh, president; Ralph Talbot, vice-president; Fred Dunn, treasurer; John Lamb, M.D., secretary; Ancel Earp, executive committee chairman; and Hugh Payne, general manager.

Those chosen for the new executive committee besides those named are: C. J. Masterson, Roy Lytle, Stanley Draper, W. T. Payne, W. F. Keller, M.D., Henry Griffing, Frank Buck, Frank Sewell, Charles Follonsbee, and Harry Frantz.



(Left) Governor Roy J. Turner speaks to the group at the site presentation ceremonies held on the wind-swept plain adjacent to the School of Medicine of the University of Oklahoma. In the background is the architect's drawing of the proposed Oklahoma Medical Research Foundation.



(Right) Giving the audience his views of research and how it should be carried on is the former atomic bomb director, Maj. Gen. Leslie R. Groves, guest speaker at the Medical Research Foundation banquet in the Zebra Room of the Municipal Auditorium, Oklahoma City. At the extreme left is C. McCraw, president of Variety Clubs international, who also spoke briefly concerning Variety Club's gift of $100,000. Next to Maj Gen. Groves is the wife of Oklahoma's governor, Mrs. Roy J. Turner.

ATOMIC BOMB RESEARCH DIRECTOR IS GUEST SPEAKER AT BANQUET

Outlines Plans on How To Carry on Research

"I feel we must decentralize our research . . . get it away from the big cities where Americanism is fading out," Maj. Gen. Leslie R. Groves, former director of the atomic bomb project, told the guests at the research foundation banquet in the Zebra Room of the Municipal Auditorium Friday night, October 3.

As deputy chief of construction of the chief of engineers, Maj. Gen. Groves was selected during the summer of 1942 to direct the nebulous, secret-shrouded research within the atomic bomb project.

Maj. Gen. Groves explained that "the aid to medical and biological research is what atomic energy means today — not power." He further stated that the planned medical research foundation will be a success only "if all the people of Oklahoma are behind it."

He warned against duplication of effort and explained that information gained at one institution must be available to others working on similar problems.

Urging Oklahomans not to put a time limit on research he advised the selection of "those not afraid to make decisions."

For the men of science who will work against disease, he urged selecting assignments that will hold their interest and he further insisted on the availability of adequate facilities. They should not be bothered with administrative details, he said.

In outlining his points for the success of the research foundation, Maj. Gen. Groves stressed the importance that Oklahoma must have medical training equal to anywhere in the country.

Concluding his speech, the atomic bomb coordinator reminded Oklahomans, "Most strides in science have been the result of arduous research and thousands of experiments."

(Below) The picture on the lower part of the page is another scene from the dinner in the Zebra Room. Shown in the background is the speakers' table with a spotlight on the architect's drawing of the soon-to-be-built foundation.





The Diagnostic Family is Growing

A new member has been added to the ever-growing Ames Diagnostic Family. The name of the latest arrival is—Hematest.

Here are the 3 members of the group to date:

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Tablet, *no heating* method of detection of urine-sugar.

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All products are ideally adapted to use by physicians, public health workers and in large laboratory operations.

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(Continued from Page 456)

6. Periarthritis of the shoulder 3

Included in the above series is a patient suffering from severe proximal chest pain in whom the diagnosis of radiculitis resulting from degenerative arthritis of the spine had been made. As this patient is the former professor of pharmacology of the Oklahoma Medical School, his report is quoted verbatim: "After seeing Dr. Ishmael in March, 1947, the Dolophine (2.5 mg. oral capsule) was taken at six hour intervals the first day and on the second day one capsule was taken morning and evening and on the third day only one capsule in the morning was taken. Following this, the dosage did not exceed one capsule per day. There was relief of pain in 20 minutes, which lasted a full day. Side effects were slight vertigo and slight constipation. The relief of pain was really remarkable."

SUMMARY

a. A brief outline of the pharmacological and clinical nature of the drug is given.

b. A list of disorders causing pain in 106 patients presented is given in detail.

c. Classifications are made as to the efficacy of the drug in controlling the various types of pain indicating no great specificity except perhaps in the control of discogenic nerve root pain.

d. Dosage, induction time, duration of analgesia, side effects, and habituations are discussed.

CONCLUSIONS

Dolophine, or Amidon, as it is known in Europe, or Methadon as it has been designated, is a satisfactory analgesic for the use in the control of bone and nerve root pain. Its chief use is in patients whose pain is too severe for aspirin and too chronic in nature for morphine. In using this drug, however, the possible danger of habituation should be borne in mind until extensive clinical trial establishes this drug as definitely habit forming or not.*

*Since this paper was prepared, Methadon has been released for general use by the food and drug administration. It has been classed as a narcotic by proclamation of the President of the United States of America.

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2. Kirchhof and David: *Clinical Trial of a New Synthetic Heptanone Analgesic* (Dolophine). I. Preliminary Report. Anton C. Kirchhof, M.D., Norman A. David, M.D., Portland, Oregon, Department of Anesthesia and Pharmacology, University of Oregon Medical School.

HAVE YOU HEARD?

Oklahoma initiates accepted into fellowship at the thirty-third convocation of the American College of Surgeons held in New York recently as the final event of the Clinical Congress are Nasry F. V. Barkett, M.D., Oklahoma City; Battey B. Coker, M.D., Durant; Everett B. Neff, M.D., Oklahoma City; Franklin D. Sinclair, M.D., Tulsa; Robert S. Srigley, M.D., Ardmore; Richard G. Stoll, M.D., Chickasha; and Benjamin W. Ward, M.D., Tulsa.

R. A. Harkins, M.D., has been appointed part time health officer of the Pittsburg County Health Department.

D. G. Willard, M.D. Norman, has been added to the staff of Ellison Infirmary, Oklahoma University, on a part time basis, it has been announced. His appointment will become effective December 1. Dr. Willard is now staff physician for the university football team.

H. C. Wheeler, M.D., McAlester, also attended the infantile paralysis course for physicians at Knickerbocker Hospital in New York during the first week of October.

Mack I. Shanholtz, M.D., director of the division of preventive medicine, Oklahoma State Department of Health was one of the speakers at the public health and welfare conference held recently at Princeton University. Dr. Shanholtz discussed local health departments in Oklahoma and also served as consultant for one of the discussion groups.

J. J. Smith, M.D., Shattuck, has been appointed County Superintendent of Health of Ellis County.

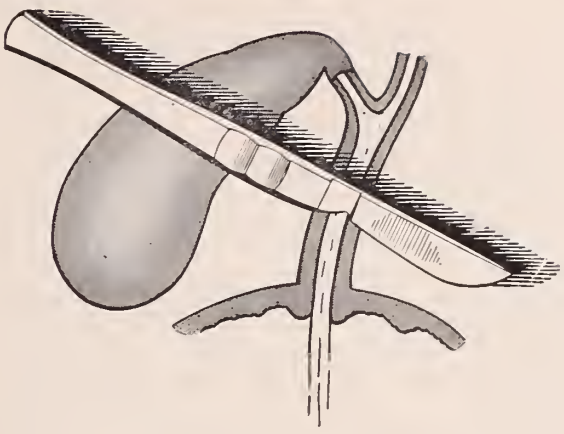
The Carter County Medical Society recently met at the CCC camp at Lake Murray for an outdoor meeting. George Garrison, M.D., professor of pediatrics of Oklahoma University was guest speaker and discussed "Infant diarrhea of the new born, chronic cold in the new born, changing type of respiratory infection, erythroblastosis fetalis, the thymus gland and feeding of babies."

In charge of arrangements were J. M. Gordon, M.D., president of the county society, and Don Cunningham, M.D. Doctors attending were given a fried chicken and fish to take home to their families and a generous supply of food was given to the Salvation Army, county secretary G. E. Johnson, M.D., reports.

FOURTH ANNUAL CLINICAL CONFERENCE
of the
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MEDICAL ABSTRACTS

STREPTOMYCIN IN SURGICAL INFECTIONS: OTITIS EXTERNA, OTITIS MEDICA, MASTOIDITIS, BRAIN ABSCESS, AND MENINGITIS. E. J. Pulaski et al. Archives of Otolaryngology, 45:503-515, (May) 1947.

This is a report on the treatment of various infections with streptomycin. All cases occurred in a U. S. Army hospital. Formerly, penicillin and the sulfa drugs have been used for the treatment of surgical infections. However, the success was not complete, and there were always cases refractive to the chemotherapeutic agents or to penicillin.

In chronic otitis externa and media the sulfa drugs are of limited value, since their bacteriostatic action is inhibited by pus and necrotic tissue elements.

Streptomycin has a lower toxicity than the sulfonamide drugs. Its action is not inhibited by the products of proteolysis. It has to be given parenterally, and after injection it readily diffuses into the body fluids in bacteriostatic quantities. It acts against the majority of gram-negative, and many of the gram positive organisms. Yet, many bacteria become soon "fast" against the action of streptomycin

In five cases streptomycin topically applied cured chronic otitis externa due to susceptible organisms refractory to therapy with other agents. Its apparent effectiveness against infections due to organisms that have been proved susceptible warrants more extensive trials.

Streptomycin is also a promising agent in the management of chronic otitis media. Pyocyaneus and Proteus may be refractory to the drug, and may require larger, perhaps harmful concentrations. It is also a valuable adjuvant to surgical intervention in the treatment of mastoiditis.

The role of streptomycin in the management of brain abscess cannot be fully defined from this series of cases. It is believed that it sterilizes the walls and tracts of residual abscesses. In meningitis, the best results are obtained with combined systemic and intrathecal administration of the drug. Yet, it never can substitute for the adequate surgical treatment whenever surgical intervention is indicated.—M.D.H.

The books which help you most are those which make you think the most. The hardest way of learning if by easy reading; every man that tries it finds it so. But a great book that comes from a great thinker—it is a ship of thought, deep freighted with truth, with beauty too. It sails the ocean, driven by the winds of heaven, breaking the level sea of life into beauty where it goes, leaving behind it a train of sparkling loveliness, widening as the ship goes on. And what treasures it brings to every land, scattering the seeds of truth, justice, love, and piety, to bless the world in ages yet to come. *Theodore Parker: Lessons from the World of Matter and the World of Men.*

MEDICAL SCHOOL

CALENDAR — NOVEMBER, 1947

SURGICAL PATHOLOGIC CONFERENCES — Each Tuesday 12:00 Noon to 1:00 P.M.

MEDICAL CONFERENCES — Each Wednesday 9:00 A.M. to 10:00 A.M.

CLINICAL PATHOLOGIC CONFERENCES — Each Thursday 12:00 Noon to 1:00 P.M.

TUMOR CLINICS—First and Third Tuesdays (November 4 and 18) 8:00 A.M. to 9:00 A.M.

UROLOGIC-PATHOLOGIC CONFERENCE — Second Tuesday (November 11) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING — Second Friday (November 14) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE — Fourth Monday (November 24) 6:45 P.M. to 7:30 P.M.

Cleve Beller, M.D., (Med '43), Resident in Medicine at University Hospital attended a meeting of the Biological and Medical Sciences section of the Atomic Energy Commission at the Brookhaven National Laboratory, New York, October 16 to 18. This meeting was called for the purpose of considering the uses of radioactive isotopes. Dr. Beller participated in a panel discussion on research opportunities.

John F. Hackler, M.D., (Med '33), Professor of Preventive Medicine and Public Health, attended the annual meetings of the Conference of Professors of Preventive Medicine and the American Public Health Association in Atlantic City, New Jersey, October 6 to 10.

William P. Scarlett (Med '23) is the health officer of Little Rock, Ark.

MARRIAGE: Dorothy Elizabeth Gore, M.D., (Med '44) to Clarence McCain McMurray, M.D., August 23, 1947, at Columbia, S. C.

John Berry Gilbert, M.D., (Med '43) is now practicing at 407 Community Building, Ponca City, Okla.

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GENERAL NEWS

GOING TO THE SOUTHERN MEDICAL CONVENTION?

The following information has been furnished us by C. Mack Jones, general agent, passenger department, St. Louis-San Francisco Railway Company, for those planning to attend the Southern Medical Association meeting in Baltimore, November 24-26.

Through Pulman car from Oklahoma City to Baltimore will leave Oklahoma City via Frisco at 5 P.M., November 22, and arrive in Baltimore via B. & O. November 24 at 8:38 A.M. Round trip rail fare is $90.46 and one way fares Oklahoma City to Baltimore are: upper, $10.75; lower, $14.09; bedroom, $28.18; compartment, $39.45; and drawing room, $49.45. All fares include federal tax.

Two Flights Also

American Airlines list their schedules as follows: Leave Oklahoma City 7 o'clock a.m. and arrive at Baltimore, 2:27 a.m., or leave Oklahoma City 12:35 a.m. and arrive at Baltimore the following morning at 8:16 a.m. Return schedules are: leave Baltimore 1:15 p.m. and arrive Oklahoma City 7:55 p.m.; leave Baltimore 11:28 p.m. and arrive Oklahoma City, 3:55 a.m.

One way fare is $69.30 plus 15 per cent tax and round trip is twice that amount. Further information can be obtained from the American Airlines system, 111 West First Street, Oklahoma City, phone 2-5237. The Tulsa office is located at 507 South Boston, phone 3-8173.

OCTOBER CANCER SYMPOSIA DRAWS STATE DOCTORS

Sponsored by four of the state's health organizations, the Oklahoma State Medical Association, the dental society, cancer society, and health department, the cancer symposia was held during the week of October 5 in nine Oklahoma cities.

Designed to bring information to doctors and dentists on the latest methods for diagnosing and treating cancer patients, afternoon and night sessions were held in each of the sections.

Malignancies of the mouth were discussed by Fred A. Henny, D.D.S., associate surgeon of the Henry Ford Hospital, Detroit, Mich., and James B. Smith, D.D.S., head of the department of oral surgery, George F. Geisinger Memorial Hospital, Danville, Pa.; William S. McComb, M.D., Memorial Hospital, New York City, and Thomas G. Orr, M.D., professor of surgery, University of Kansas School of Medicine, spoke on mallignancies of the head and neck; Thomas H. Burford, M.D., associate professor of surgery, Washington University School of Medicine, St. Louis, Mo., and Michael E. DeBakey, M.D., associate professor of surgery, Tulane University, New Orleans, La., malignancies of the chest; and A. H. Dowdy, M.D., chairman, department of radiology and director, atomic energy project, University of Rochester School of Medicine and Dentistry; and Fred J. Hodges, M.D., professor, department of roentgenology, University of Michigan School of Medicine, Ann Arbor, Mich.

NURSES' ASSOCIATION PLEDGES HELP IN SHORTAGE CRISIS

Causes Outlined, Plans Explained

"The public must be roused to a clearer understanding of the present crisis in nursing if the situation is to be met and the health of the American people is to remain safeguarded," explains Ella Best, executive secretary of the American Nurses' Association, in a statement issued from the national headquarters of the association.

Pointing out that the demand for nurses has skyrocketed in the past few years, she defined three factors the group feels are the causes. They are: (1) Inadequate economic security and unsatisfactory conditions of employment, (2) lack of adequate legal control of nursing by the state, and (3) faulty distribution of nursing service.

"If the right kind of women are to come into nursing in the number that the public demands and that the public health requires, these conditions must be met. The American Nurses' Association pledges itself to do all in its power to bring this about."

OKLAHOMA PHYSICIAN NAMED FOR RESEARCH PROJECT

B. F. Keltz, M.D., Receives Grant

B. F. Keltz, M.D., of the University of Oklahoma School of Medicine is one of the Oklahomans recently named for a research project activated under the national institute of health research grants-in-aid programs.

Dr. Keltz' subject matter under the study section metabolism and endocrinology is on sex hormonal imbalance of pregnancy in diabetic with $5,508 as the amount allotted for the operating period from July 1, 1947, to June 30, 1948.

Projects totaling 699 with grants of $10,214,174 were made throughout the United States with study sections to be made in antibiotics, bacteriology, biochemistry and nutrition, cancer, cardiovascular, dental, gerontology, hematology, malaria, mental health, metabolism and endocrinology, pathology, pharmacology, physiology, public health methods, radiobiology, rodent control, sanitation, surgery, syphilis, tropical diseases, tuberculosis, and virus and rickettsial.

WELFARE DEPARTMENT PLANS AID FOR INCAPACITATED PERSONS

Five OSMA Members Named to Committee

Need for means to provide remedial medical treatment for incapacitated persons as a more progressive step in keeping them off welfare rolls was given general discussion by the medical advisory committee to the Department of Public Welfare at its meeting October 5 in Oklahoma City.

Joseph W. Kelso, M.D., Oklahoma City, is the newly-elected chairman and four new members of the committee are: Wilbur F. Lewis, M.D., Lawton; John C. Dague, M.D., Tulsa; George Ross, M.D., Enid; Claude E. Lively, M.D., McAlester.

Revisions in agency policy regarding the definition of physical and mental incapacity have been adopted with greater emphasis now placed on the way in which the disability affects the individual's employment in a job he is qualified to perform and the committee discussed

the amount of mouey ($12,875 over a six mouth period) spent on examiuatious and suggested that it would be of more value if it could have beeu utilized for treatment.

CARE MAKES APPEAL

Guaranteeing delivery, CARE (Cooperative for Americau Remittances to Europe, Iuc.) urges cooperation in the Christmas gift campaign of the organization. An order of $10 sent to CARE, 50 Broad Street, New York 4, N. Y., will send 22 pounds of food, clothing, and textiles to anyone in 15 countries of Europe with a donor certificate enclosed. Enough food is in each package to feed supplementary meals to a family of four for a full month. Other CARE packages are baby food, infant food, blanket, cotton, woolen, knitting wool, household linen, and layettes.

ORTHOPEDIC DEADLINE SET

Applications for part one of the examination of the American Board of Orthopedic Surgery must be received by the secretary, Francis M. McKeever, M.D., 1136 West 6th St., Los Angeles 14, Calif., not later than January 15, 1948.

UROLOGY AWARD TO BE MADE

The American Urological Association offers an anuual award of $1000 (first prize of $500, second prize $300, and third prize $200) for essays on the result of some clinical or laboratory research in urology. The first prize essay will appear ou the program of the forthcoming meeting of the American Urological Association to be held at the Hotel Statler, Boston, Mass., May 17-20.

PATHOLOGISTS ELECT OFFICERS

New officers of the Oklahoma Association of Pathologists are: Bela Halpert, M.D., Oklahoma City, president; Emil Palik, M.D., Tulsa, vice-president; J. N. Owens, Jr., M.D., Shawnee, secretary; and W. Floyd Keller, M.D., Oklahoma. The new officers were chosen at a meeting in Oklahoma City, Sunday, October 12.

ACADEMY OF ALLERGY TO MEET

The American Academy of Allergy will hold its annual convention at the Hotel Jefferson, St. Louis, Mo., December 15-17, inclusive. Papers will be presented dealing with the latest methods of diagnosis and treatment as well as the results of investigation and research. Advance copies of the program may be obtained by writing to the chairman on arrangemeuts, Charles H. Eyermann, M.D., 634 North Grand Blvd., St. Louis, Mo.

OBS.-GYN. REVIEW SCHEDULED

The Oklahoma City Obstetrical and Gynecological Society is planning an intensive one-day review on obstetrics and gynecology January 17, 1948. Dr. Willard Cook of Galveston, Texas, Professor of Obstetrics and Gynecology at the University of Texas, will be guest speaker. Complete program will be announced later.

NEW A.M.A. DIRECTORY SLATED

Preparations are now beiug made to publish the new, eighteenth edition of the American Medical Directory. The last edition of the directory was issued late in 1942. A directory card will be mailed to every physician in the United States, its depeudencies, and Canada during November requesting information to be used in compiling the uew directory. Any physician not receiving a directory informatiou card by December 1 should write at once to the directory department of the A.M.A. requesting that a duplicate card be mailed.

GENERAL PRACTITIONERS' PROGRAM AT A.M.A. CLEVELAND SESSION

In addition to technical and scientific exhlbits, a program designed particularly as postgraduate education for general practitioners will be presented at the supplemental session of the American Medical Association in Cleveland, Ohio, January 5 to 9, 1948.

The council on scientific assembly, whose chairman is Henry R. Viets, M.D., of Boston, has prepared a program which will include papers, panel discussions and symposia on many of the topics now most prominently before members of the medical profession. Among the topics to be covered are peptic ulcer; blood dyscracsias (any abnormal composition of the blood); the chronic invalid; posthospital care of patients with cancer; treatment of the fat and the lean; cancer of the prostate; the use of BCG (Bacillus Calmette Guerin) vaccine in the preventiou of tuberculosis; uterine hemorrhage; multiple injuries in automobile accidents; the treatment of pathologic conditions in adolescence, the treatment of the healthy and sick diabetic patieut; jaundice; the Rh factor; and the interpretation of x-ray films of the chest.

During the first two days of the session the council on iudustrial health of the American Medical Association will conduct a program devoted particu'arly to problems in its field.

Plauned for the scientific exhibit is a demonstration of the operatiou of a diagnostic cancer clinic, in which visiting physicians will be given the opportuuity to undergo themselves the routine of such an examination.

NEW POSTGRADUATE CIRCUIT OPENS DECEMBER 8

Circuit number five of the Postgraduate lectures on Gynecology opens December 8, 1947, with teaching centers at Wewoka, Shawnee, Pauls Valley, Norman and Oklahoma City. These centers are for the physicians residing in Hughes, Seminole, Pottawatomie, Oklahoma, McClain, and Garvin counties.

The instructor is J. R. B. Branch, M.D., and the series of 10 lectures per week for 10 weeks in each of the listed towns has already proved to be one of the most popular courses sponsored by the Association. Enrollment cards have been mailed. Please return yours now to facilitate the circuit five program.

OBITUARIES

William G. Husband, M.D.

1887-1947

Wiliam G. Husband, M.D., Hollis, was killed iu an automobile accident iu Detroit, Mich., September 27. He and Mrs. Husbaud had gone to Detroit to visit their son, W. G. Husband, M.D.

Following World War I Dr. Husband returned to Hollis where he established his practice and lived until his death. He was born iu Angelina County, Texas, and received his medical education at Vanderbilt Uuiversity, Nashville, Tenn. In 1928 he built the Hollis Hospital. He was a leader in civic affairs and was au enthusiastic supporter of the Hollis schools. Dr. Husband was one of the leaders in getting the ground and providing the funds to build the football stadium which was later dedicated and named Will Husband Stadium.

A charter member of the Rotary Club, he had served as president at one time. He was a steward in the Methodist Church, a director of the chamber of commerce, a stock holder in the bank, and had numerous other business and farm interests in Oklahoma and Texas.

Survivors are his widow, two daughters, Mrs. Robert Scott, Lawton, and Mrs. Robert Froeber, Winston Salem, N. C., and one son, W. G. Husband, M.D., Detroit. Two sisters, Mrs. George Bell and Mrs. Carl Snider, both of Harmon County, and two brothers, Roy Husband, Hollis, and Claud Husband, Hollis, also survive. There are three grandchildren.

Charles A. Brake, M.D.

1895-1947

Charles A. Brake, M.D., assistant physician at Central State Hospital and professor of psychiatry at the University of Oklahoma, died at his home iu Norman following a cerebral hemorrhage.

Dr. Brake graduated from the medical school of the University of Oklahoma in 1917 and served his internship at University Hospital. He came to Norman from Medford in 1924.

Dr. Brake had been in ill health for several years. He was a member of the American Psychiatric Association, Oklahoma State Medical Association, the American Legion, Masonic Lodge. He was also a member of St. John's Episcopal Church, Norman.

Survivors are his widow, Sama J. Brake of the home; a son, Charles M. Brake, University of Oklahoma medical student; a daughter, Mrs. E. W. Yates, graduate nurse of Booneville, Ark.; his parents, Mr. and Mrs. C. M. Brake of Geary; and three grandsons.

Edward F. Taylor, M.D.

1873-1947

Edward F. Taylor, M.D., 74-year-old Maysville physician, died September 17 after an illness of two weeks.

A practicing physician at Maysville for 20 years, he came to Oklahoma in 1904 soon after his graduation from the University of Tennessee School of Medicine. He had also practiced in Antlers, Clinton, Clarita, aud Bromide.

He is survived by his widow, Mrs. Edna Taylor of the home, six sons, Edward R. Taylor, Kansas City, Mo., Lt. Col. Henry T. Taylor, U. S. Army, Boise, Idaho, Charles E. Taylor, Robert L. Taylor, M.D., and Harvey W. Taylor of Oklahoma City, and Thomas G. Taylor, Wewoka; a daughter, Mrs. Margaret Blackford, Oklahoma City; a half brother, Winfred Taylor, Hopkinsville, Ky.; a half sister, Mrs. Ethel Hargiss of Murray, Ky., and 11 grandchildren.

Gayfree Ellison, M.D.

1915-1947

Funeral services were held September 22 for Gayfree Ellison, M.D., of Pawhuska who died September 15.

Dr. Ellison was born June 25, 1915, in Norman. He was the son of the late Gayfree Ellison, Sr., M.D., for whom Ellison Infirmary at Oklahoma University was named.

The young Pawhuska physician graduated in 1940 from the University of Oklahoma School of Medicine and served his internship iu Baltimore City Hospital. He was in the army four years and following his discharge in 1945, he was on the state hospital staff at Clinton for a year.

Dr. Ellison was secretary of the Osage County Medical Society, aud was a member of the Kiwauis Club aud the American Legion. He was a member of St. Thomas' Episcopal Church.

W. W. Sames, M.D.

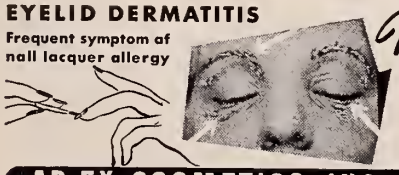
1961-1947

W. W. Sames, M.D., Hartshorne, pioneer Oklahoma doctor, died October 4 in a McAlester hospital.

Dr. Sames was a graduate of Missouri Medical College, later known as Washington University, St. Louis, Mo. He had been a doctor at Hartshorne since 1899.

He was a member of the board of trustees of the First Christian Church and a member of the local school board. He was also a 32nd degree Mason.

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(Continued from Page 453)

Kansas University and associate engineer for the division of sanitation, Kansas State Board of Health. The article was written this summer when he worked for the bureau of sanitary engineering of the state health department as he joined the staff of the University of Oklahoma as associate professor of sanitary engineering this fall.

William K. Ishmael, M.D., F.A.C.P., Oklahoma City, wrote "The Use of Dolophine (Dimenthylamino-heptanone-Methadon) in the Control of Pain in Bone and Joint Disorders" that appears in this issue. Dr. Ishmael graduated from the University of Oklahoma in 1935 and limits his specialty to internal medicine. He has been certified by the Internal Medicine Board No. 3076 and is a member of the American Rheumatism Association and the Southern Medical Association.

John R. Stacy, M.D., Oklahoma City, is the other author of "The Use of Dolophine (Dimenthylamino-heptanone-Methadon) in the Control of Pain in Bone and Joint Disorders." Dr. Stacy graduated from Western Reserve in 1942 and limits his practice to orthopedic surgery. He has completed the first half of this orthopedic surgery certification. Dr. Stacy is now a staff member of the McBride Clinic Bone and Joint Hospital.

Philip M. McNeill, M.D., Oklahoma City, assisted in preparing the Clinical Pathologic Conference this month. Dr. McNeill graduated from the Oklahoma University School of Medicine in 1923 and limits his practice to internal medicine. Among the organizations he is a member of are the following: American College of Chest Physicians, American College of Physicians and American College of Allergists.

Howard C. Hopps, M.D., Oklahoma City was the other author of the Clinical Pathologic Conference. Dr. Hopps, who is chairman of the department of pathology, University of Oklahoma School of Medicine, has been mentioned in this column before. He is secretary of the alumni association of the medical school and is a member of the International Association of Medical Museums, the American Association of Pathologists and Bacteriologists, the American Society for Experimental Pathology and others.

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[1]Human Fertility 10: 25 (Mar.) 1945.

[2]Warner, M. P.: J.A.M.A. 115: 279 (July 27) 1940.

gynecological division

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BOOK REVIEWS

SYNOPSIS OF PATHOLOGY. W. A. D. Anderson, M.A., M.D., F.A.C.P. 741 pp. with 327 illustrations and 15 color plates. Price $6.50. St. Louis: C. B. Mosby Co., 1946.

In the second edition of this text "an attempt has been made to adhere to the principles originally employed, the objective being a concise but comprehensive presentation of pathology." Approximately one-third of the text is devoted to general pathology (of which more than half deals with inflammation and infectious diseases). The remaining two thirds are concerned with special or systemic pathology. Considerable new material has been added with greater emphasis on tropical diseases and conditions important in "war medicine." The chapters dealing with viral, rickettsial, spirochetal, mycotic, protozoal, and helminthic infections have been enlarged and revised, and deserve special commendation. The section on oncology also merits high recommendation.

Those chapters which consider diseases by organ systems are well organized and written in such a manner as to be of interest to the specialist as well as to the general practitioner. The brief preliminary consideration of pertinent anatomic and physiologic data should contribute to a more thorough understanding of the pathologic processes discussed. At the end of each chapter is found a list of current references which adds considerable to the value of the book.

Illustrations are profuse, pertinent, and of excellent quality. Seventy-four illustrations, including four color plates, have been added to this edition (327 in all). There are 18 tables included in the text and these concern such things as differential characteristics of inflammatory and ulcerative lesions of the intestines, vitamin deficiency diseases, calcium, phosphorus, and phosphatase of bones in skeletal diseases, etc.

This text is highly recommended for all students of medicine who wish a well-balanced, accurate, concise presentation of pathology. It is considered to be of special value for clinicians who wish to review this subject with a minimum of time and effort.—Howard C. Hopps, M.D.

GYNECOLOGY WITH A SECTION ON FEMALE UROLOGY. Lawrence B. Wharton, Ph.B., M.D., Assistant Professor of Gynecology Johns Hopkins Medical School. Second Edition. 1027 pp., with 479 illustrations. Price $10. Philadelphia and London: W. B. Saunders Company, 1947.

This is the second edition of an excellent textbook of gynecology. The reader is struck with the idea that the author has made every attempt to distinguish between fact and fiction, to stress established principles, and in discussion of unsettled problems, to consider representative opinions, however divergent they may be. The excellence of the sections on physiology and endocrinology emphasize that the specialty of gynecology is no longer a mere surgical art. In this book, in addition to describing accepted surgical principles and operative procedures, he has stressed features that are generally useful: the care of the normal woman, the prevention of gynecologic disease, the differentiations between functional disorders and organic disease — in brief, features that have to do with the maintenance of health in women, and the prevention and early recognition of gynecologic disorders.

In presenting the material in this book, the requirements of the medical student have been constantly kept in mind by the author. At the beginning of each chapter is an outline so that the student may see at a glance the whole subject in its proper proportion. Interesting historical facts have been presented and bibliographies appended for those who wish to investigate the subject more thoroughly. The normal and pathologic physiology has been very well handled throughout.

Particular attention should be made to the quality of the illustrations used in this textbook. The micro-photographs are excellent. The illustrations of operative technique are superb and exemplify the usual work of Max Brodel and his school. The section on "Female Urology" is particularly interesting and extremely practical. The use of the simple Kelly air cystoscope has been emphasized, and the technique so well described that it should become a part of the armamentarium of every general practitioner. This second edition also includes a section on the use of the water cystoscope. The relationship of female urology to gynecology is handled extremely well. It is the opinion of this reviewer that this textbook incorporates the essential knowledge of these two allied subject better than any in general use today.—Gerald Rogers, M.D.

THE SELECTED WRITINGS OF BENJAMIN RUSH. Edited by Dagobert D. Runes. 436 pages. Philosophical Library, 1947. New York. Price $5.00.

This attractive compilation of the selected writing of one of the most versatile and intriguing of early American physicians is well worth a careful reading. Rush was not only a great physician and naturalist but an outstanding humanitarian. He was interested in all education, scientific and cultural movements. He was a crusader and reformer; though sometimes wrong he was an untiring champion of a better way of life.

In the author's preface we find this striking statement: "Only Thomas Paine — a close friend — could match Benjamin Rush in uncompromising revolutionary spirit. Rush, incidentally, suggested the title for Paine's historic pamphlet, 'Common Sense.' Together, they ploughed the field for revolution in Colonial America. And only Benjamin Franklin, in the young United States, had the humane versatility, the many-sided interests, the wide learning of Benjamin Rush."

Benjamin Rush's writings are of particular interest to Oklahomans of today because of his outstanding reforms in the care of the mentally ill and his anticipation of modern methods. The breadth of his knowledge and the wide range of his interests and activities are revealed in the headings under which the editor lists the interesting gleanings from his voluminous writings: "On Good Government," "On Education," "On Natural and Medical Sciences," "On Miscellaneous Things," and "Appendix."

The format is pleasing in appearance, the book is easy to handle, the type is clear and the content worthy of the physician's time. Here is a good bedside volume. —Lewis J. Moorman, M.D.

THE JOURNAL
of the
OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

BOOKS

The general practitioner who has a good mind and a sound background can gain additional knowledge and wisdom by regularly spending a little of his spare time with books. Even the march of science cannot leave him far behind if he faithfully pursues his intellectual obligation. This term is used advisedly. No physician has a right to deal in human lives without keeping up with his trade. He must know the market and figure his margins in order to escape utter ruin.

The physician who follows his profession without books is bound to become as blank as Rip Van Winkle. When it is too late to pull himself out of Sleepy Hollow he will awaken with a sad realization of his unpaid debt to humanity. Hopelessly, he will accept his intellectual rags and stand ashamed in the presence of those who daily commune with the masters. With palid acquiescence he will acknowledge the attainments and skills of those who read.

Osler has said: "For the general practitioner a well-used library is one of the few correctives of the premature senility which is so apt to overtake him. Self-centered, self-taught, he leads a solitary life, and unless his everyday experience is controlled by careful reading or by the attrition of a medical society it soon ceases to be of the slightest value and becomes a mere accretion of isolated facts, without correlation. It is astonishing with how little reading a doctor can practice medicine, but it is not astonishing how badly he may do it."

Among the greatest scholars in Great Britain during the 19th century was one of the busiest general practitioners of his time. After his day's work was done, he made his invalid wife comfortable, helped his children with their Latin and Greek and then went to bed with his books. This was Francis Adams of Bauchary. Out of that bed; from that union of mind and books came our only complete English edition of Hippocrates. Many other great translations were conceived and born through the same assidious wooing of the immortals. Not only did Francis Adams go to bed with his books, he went to his patients with them on his person. It was not uncommon to see him on horseback with his coat packets stuffed and the overflow in his hand in order that his comprehending eyes might transmit the choice gleanings to a fallow spot in his acquisitive brain.

He was seeking no material reward, only the joy of working kept his mind on the canvas as he splashed "with brushes of comet's hair." Spurning the offer of a University of Aberdeen chair in the classics he kept to his books and practice on horseback.

Osler, the omnivorous bibliophile, shaved and bathed with a volume before him. With his magic word "work" in mind, want of time was no excuse. It is doubtful if the doctor who doesn't read will know how to gain admission to the lower regions. Even the devil might question his eligibility.

Richard De Bury said: "O Books! ye alone are free and liberal. Ye give to all that seek, and set free all that serve you zealously."

John Milton's opinion contains good medicine: "For Books are not absolutely dead things, but do contain a potency of life in them to be as active as that soul was whose progeny they are; nay, they do preserve as in a vial the purest efficacy and extraction of that living intellect that bred them."

CONFUSION COMPOUNDED FOR THE G. P.

Looking through the editorial pages of recent issues of the Journal of the A.M.A., the writer wondered what the average general practitioner must be thinking when he learns that cancer, so definitely in the public eye, is closely related to nutrition and that (1) certain "pure compounds" apparently initiate "Carcinogenesis" and make it possible to project a research program on a molecular basis," (2) that "substances characteristic of natural diets can, under controlled conditions with animals, decide the issue whether or not tumors will develop — choline in the feeding of rats illustrates this strikingly" (3) "Caloric intake, percentage and composition of ingested fat and certain members of the vitamin B complex, especially riboflavin and the more complex agents that can be transmitted in milk, can influence carcinogenesis. Important also is the use of tracer elements to explore what happens inside normal and cancerous cells."

If he reads more he will not know more about cancer in man but in rats and he will be worried about the influence of vitamin B complex, especially ruboflavin, also cloric restriction. What about this? Should he continue to prescribe vitamins? What will happen to his loyal patrons who get their vitamins at the general store with their boots and their bust supporters?

The next editorial poses the question of mutation as a cause of disease. In this modern age even the most out-of-the-way general practitioner is smart enough to prepare for a busy season if mutation can cause disease. Yet a careful perusal may cause him to ponder because he will discover that in "human disease gametic mutation is of greater importance than somatic mutation." And then unfortunately, he will learn that "Since observational data are limited to relatively few generations and since human cross breeding experiments may not be performed we shall never be able to demonstrate with certainty that a hereditary human disease arises from mutation."

Finally, in the same issue of the Journal he is confronted with a discussion of "Agnogenic myeloid metaplasia of the spleen." Hopefully, he reads the first paragraph and concludes that he has an advanced case of it since the leading symptom is weakness.

He closes this issue (Nov. 8) and turns to the next (Nov. 15). Maybe he will find something useful, something he can put into practime. Yes, here it is: "Pulmonary Calcifications." Of course, they are predominately due to tuberculosis and should be helpful in diagnosis. But the editorial raises many questions and exhibits a long discussion based upon the "etiologic relation between non-tuberculous, benign pulmonary calcifications and a benign form of histoplasmin, some react to tuberculin and histoplasmin, some to both and some to neither. Others react to blastomycin and to haplosporangin. By the time he approaches the end he is ready for this conclusion: "These studies strongly support the hypothesis that pulmonary calcifications very frequently are caused by whatever agent produces sensitivity to histoplasmin, at least in some parts of the United States." In addition to all the other considerations he must check to see in what part of the United States he resides and its sectional relationship to histoplasmosis.

The next editorial, two columns long, tells of a rather rare condition known as cystic fibrosis of the pancreas. "All these patients presented symptoms which were recognized as preceliac in type and which led to the diagnosis of celiac disease."

Pursuing this syndrome he is gratified to find that the symptoms are comparable to those following ligation of the pancreatic duct in dogs — autopsy findings and the pathology are discussed with many probabilities including vitamin A deficiency and thickening of acinar secretions. He wonders how he could recognize "thickening of acinar secretions" in practice.

Finally, under current comment, this general practitioner is disturbed to find that cheese has a relation to disease. He learns that "the organisms most commonly associated with cheese-borne infection are members of the Salmonella group, the Staphylocci, the Brucella group and the Clostridium botulinum."

Since he cannot cheese the whole problem he contemplates the choice between Swiss and Cheddar and hopes that there was not a typhoid carrier anywhere along the milky way.

At long last he learns under a discussion of carbohydrate calories that "when free choice of foods is permitted, the appetites of experimental animals are generally responsive to nutritional need."

He reads on hoping to find out how the human being responds until in despair he folds up the Journal, takes down his hat, de-

cides to make a guinea-pig of himself and goes to the cafeteria.

Musing over his cornbeef and kraut he realizes the general practitioner must know what it's all about because the young things out of Smith, Wellesley, Vassar, and Bryn Mawr, who are just now having babies and letting down their skirts, will see what the science writers say to the public and they will want to know how to make practical application of scientific advances in their domestic economy.

This is not intended as a criticism of the greatest medical journal in the world but as an expression of sympathy for the hard-put general practitioner.

TUBERCULOSIS IN THE AGED

While being kind to the old we must protect the young. Our increasing knowledge of tuberculosis and the mounting number of old people place upon physicians a heavy responsibility. Communicable tuberculosis is more prevalent in people over 60 than in any other group. People over 60 are more constantly in contact with children and grandchildren, pay less attention to symptoms and are harder to convince than any other age groups. Even when suffering from manifest tuberculosis with tubercle bacilli in the sputum they are harder to control and more obstinately careless than those in other groups.

There are now approximately 14 million people in the United States over 60 years of age. Figures on the tubercle bacilli scattered about the homes to which these elderly people have retired would stagger the calculations of an Einstein. Each family physician must shoulder his share of this responsibility here on earth and be ready to give an accounting when he appears at the Pearly Gates.

Mass x-raying and sputum examinations in this group would save thousands from massive infection, save the doctor's face and make it easier for St. Peter to give the word.

As pointed out by Georgia Bowen in this issue of the Journal, Oklahoma has only one-half its recommended bed quota. But worse than that, Oklahoma makes no provision for patients over 55 years of age. If old people develop tuberculosis, they must be bedded down with the children and the grandchildren. How cold and impersonal, how cruel and destructive is the law. Are we even penny-wise?

A RAY OF LIGHT

The National Federation of Small Business, Inc., San Mateo, Calif., which is composed of independent business men from every section of the country, has just reported results of a poll among its members on whether they favor Senate Bill 1320 — the revised version of the Wagner-Murray-Dingell bill. Results were: For — 13 per cent; against — 85 per cent; no vote — two per cent.

The Medical profession which has been fighting this menace for many years welcomes this ally — the small business man — and it is recommended that the members of the medical profession take time from these busy days and nights to study and learn the problems of the small business man and give him the same understanding and cooperation.

It is very probable that he knows more about his business than either the doctor of medicine or the Federal Government and certainly in this day and age he has his problem.

TWENTY-FIVE YEARS AGO

The readers of the Journal will be interested in this new department. Curiosity alone should cause them to turn to the page bearing this title. The young may be amused and surprised, the old shocked and saddened, and all should be somewhat seasoned. Though "there is nothing new under the sun," stirring the shades of twenty-five years ago may turn up something worthy of our attention. As the Chinese say "look-see."

LEGITIMATE INFLUENCE

The physician's influence in his community is beyond question: he figures largely in the local pattern of life but too often he is politically inert. It's a poor citizen who doesn't use his influence to advance his country's welfare. This necessitates an interest in local state and national affairs. Today his first duty is to protect the people and the medical profession from socialized medicine. The best way to do this is to discourage all governmental paternalism sweetened with subsidies. Our lives belong to us. When we sell them we are no longer free — except to pray for the end.

SCIENTIFIC ARTICLES

COMMON NASAL ALLERGIES: DIAGNOSIS AND TREATMENT*

H. F. VANDEVER, M.D.

ENID, OKLAHOMA

The term, nasal allergy, unless defined in a specific way conveys about the same information as sinus trouble. An allergy is a specific acquired reaction — differing from the normal one — to substances which do not normally stimulate or produce any tissue change. The pathological changes consist of capillary vessel permeability with exudation and edema. Heredity probably plays a part in the tendency toward such reactions though direct transmission is not a tangible theory. The alimentary canal affords most allergic reactions as skin manifestations in infants and small children while the respiratory system is responsible for most reactions in the older. The nose carries a heavy burden as a daily filter, 20 per cent to 60 per cent of dust being retained on its mucous membrane. Here the soluable portion, allergens, are re-absorbed and cause the various degrees of allergic reaction presented by the sufferer. Those that pass to the bronchi may offer the same stimulation manifested as asthma. It is said that one-third of the cases of nasal allergy become asthma sufferers. This has not been my observation. I know that the allergic reactions of the same individual change at different periods of life. I also feel that the control of the lesser reactions may reach far toward preventing the more severe ones. These are explained as latent and secondary complications in many cases. I shall limit my discussion in this paper to the group of cases presenting themselves at the office as sinus cases. An astoundingly small per cent of sinus infections are found in this group. Many of these cases have in times past been operated for sinusitis. Practically all of this number present the same chain of symptoms, i.e.; Patient comes in complaining of ache in the head, nose, eyes, temples, ear, side of face, or head or any one or a combination of these; gets out of bed with pain or is awakened by it, lasts some or most of the forenoon or day. The pain that comes on after the patient is up, so-called sun pain, is practically never of allergic nasal origin.

On questioning the patient usually admits having had a cold or some irregularity in environment, sleeping, working or exposure to drafts, etc., that are a departure from his regular routine which has brought on the present attack. There is a second group of cases that has a recurrence of these symptoms throughout the year with no particular demonstrable exciting cause.

Examination of the nose usually reveals nothing particularly abnormal except a tight middle meatus. Since a blocked middle meatus may mean a limited or no drainage to the maxillary, frontals and anterior and middle ethmoids, some one or all of them, we may have a pressure pain (sinus) in them. The clinical demonstration of complete blockage is rare. The pain is a constant accompaniment of these cases even though the sinus is clear. The usual cause of this pain is pressure on the nerve endings in the mucosa over the middle turbinate area. My approach for relief is to shut the avenues of invasion by treatment directed at the point of absorption which consists of constricting the capillary circulation and lessening the sensitivity of the nerve endings in the mucosa. Shrinkage and anesthesia over this area usually stops all the pain. If this be true, these are not true sinus cases. These cases are purely neuralgic in character due to the pressure. The pressure due to the tumefaction, which is the resultant of an allergin. Sometimes the mucosa is pale; sometimes red. I doubt that a mucosa

*Presented before the Surgery Section of the Oklahoma State Medical Association at the Annual Meeting, May 14, 1947.

can be definitely diagnosed as allergic by color. I know that some allergic nose mucosas are pink and some pale. I have a number of patients who come to me every month or so for two or three treatments to rid them of their headaches. There has been too much written and said as to the color of the mucosa and eosinophilia and too little attention paid to the clinical signs in the diagnosis of nasal allergy. Any nasal condition relieved by shrinkage and topical anesthesia will be cleared up by treatment to the same area for a few times (three to eight). Since the difference in a coryza and a sinusitis is only a technical one, and since all coryzas are infections of the nose and adjacent nasal cavities, then all acute coryzas include the sinusitis that accompanies it. They are one and the same in many respects. There is a very definite distinction to be made between chronic sinus and acute coryza and rhinitis. The chronic sinus has a discharge, cloudiness of cavity, odor at times and may have pressure pains. When these are located, they should be drained or opened and will usually clear up. Some of the long-standing antrums I still ionize as I reported some 15 years ago. I still like it, and though sulfa drugs, penicillin and streptomycin have made this procedure necessary, less frequently, I have had to resort to it twice in the past year. The point of this paper is to call attention to the fact that the greatest number of these so-called sinus cases are neither sinus or coryzas. They are what I have chosen to term allergies as referred to above. They are the most frequent nose cases that come to me for relief. They are also the easiest relieved and the most appreciative. This group of cases are suffering from neuralgia that is caused by a swollen and congested mucosa over the middle turbinate and superior meatus. They come in with incapacitating headaches, 90 per cent are due to trouble in the superior meatus. The most of the remaining 10 per cent are of spenoid irritation. There is no pus coming from the sinus, and shots do no good. They have usually been given everything from ragweed and various pollens through liver, histamine and vitamin shots and many times diets before they come to you for relief, with a diagnosis of sinus, and sensitive to all the allergens from house dust to rat dandruff. These cases are the most grateful of any of my patients. A few well directed shrinkages and anesthetic applications give relief. When this relieves the pain, it is followed by some three to eight applications of $AgNO_3$ to the proper spot which usually affords complete relief for a month or so to a year, or until they are subjected again to some allergic excitant, either climatic, pollen, dust or idiopathic, then additional treatment is required. It goes without saying that known excitants should be avoided.

MEET OUR CONTRIBUTORS

Basil A. Hayes, M.D., F.A.C.S., Diplomate of American Board of Urology, Oklahoma City, wrote "The Treatment of Urinary Incontinence" in the December Journal. He limits his practice to urology and was certified by the American Board of Urology in May, 1936. Dr. Hayes graduated from the University of Texas in 1919. He is a member of the American College of Surgeons, Southern Medical Association, American Urological Association, Oklahoma City Clinical Society and is a member of the board of censors, Oklahoma County Medical Society.

H. F. Vandever, M.D., Enid, is the author of "Common Nasal Allergies" in this issue of the Journal. Dr. Vandever graduated from the University of Missouri and limits his practice to ophthalmology, otology, laryngology, and rhinology.

James P. Luton, M.D., A.B., M.S., Oklahoma City, is the author of "Ophthalmological Problems in General Practice" appearing in this issue. Dr. Lutou limits his practice to ophthalmology and has been certified by the American Board of Ophthalmology, 1943. He graduated from the University of Oklahoma School of Medicine in 1933.

W. W. Rucks, Jr., M.D., A.B., Oklahoma City, is another coutributor to the December Journal as his scientific article "Pericarditis Simulating Coronary Occlusion" is in this issue. Dr. Rucks graduated from Vanderbilt in 1928 aud limits his specialty to internal medicine He is a member of the American College of Physicians and the Americau Heart Association and is president-elect, 1947, and president, 1948, of his county medical society. Dr. Rucks has beeu certified by the American Board of Iuterual Medicine.

MAILED YOUR A.M.A. DIRECTORY CARD?

Any physician in Oklahoma who has not received his directory information card for the uew, eighteenth edition of the American Medical Directory is requested to write at once to the directory department requestiug that a duplicate card be mailed.

These cards should be filled out and sent in whether or not any change has occurred ou any of the points on which iuformation is requested.

Information concerning physicians, hospitals, medical organizations and activities, medical schools, specialization in the fields of medical practice, memberships in special medical societies, tabulation of medical pournals, libraries and other facts are contained in the directory.

THE TREATMENT OF URINARY INCONTINENCE*

BASIL A. HAYES, M.D., F.A.C.S.
OKLAHOMA CITY, OKLAHOMA

Uncontrollable loss of urine from the bladder is a subject which has been largely avoided. Various methods of relief have been resorted to, consisting of wearing padding or rubber urinals to catch the offending liquid. There has even been devised a clamp which can be applied to the male urethra which with gentle pressure will hold the urine in the bladder. Articles have been written advising the use of plastic procedures, wherein muscles are detached from the inner aspects of the thigh and twisted around and sewed in such a manner as to afford some type of sphincter action. Other articles have been written advising the removal of a V-shaped piece of tissue from the anterior commissure of the bladder neck through a suprapubic incision. I have been disappointed in these articles because they did not present a truly anatomical approach to the problems involved nor have their case reports been particularly successful.

In the year 1925 Dr. Edward L. Keyes wrote a short article stating that he had relieved a patient of incontinence following a perineal prostatectomy by the simple procedure of bringing the levator ani muscles together in the midline. His article was merely a case report and did not go into a discussion of the anatomy and physiology involved. Since I happened to have a case of incontinence on hand at that time resulting from a perineal prostatectomy, I used his suggestion and achieved a successful result. I have since that time used it in four other cases of incontinence following perineal prostatectomy with likewise successful results. This encouraged me to use it in two cases of congenital incontinence due to episadias and in each case it worked nicely. I then tried it in a case of congenital incontinence due to meningocele. Here also it was successful and the boy was able to enter school with dry clothes.

*Presented before the Surgery Section of the Oklahoma State Medical Association at the Annual Meeting, May 15, 1947.

So much for cases of incontinence in males. During the past 15 years I have had three cases in females who have been successfully repaired by following the same principles. Two of these were traumatic cases. In one the urethra had sloughed off leaving a hole large enough to admit one or more fingers. In the other the entire floor of the bladder was absent, leaving only an edge of tissue on either side, extending from the meatus back to the cervix so that one could spread the vaginal lips apart and look directly at the dome of the bladder. The third case was one of congenital incontinence in a girl who was slightly abnormal mentally and who apparently had no bladder neck. The bladder and urethra resembled a cornucopia in that there was no point of demarcation between the urethra and the bladder.

ANATOMY

The first thing which must be remembered in considering incontinence of the urinary bladder is that the bladder is a hollow muscular sac and is exactly like a rubber balloon; that is, the three layers of muscle are so interlaced as to be elastic in every direction. Anatomists have been accustomed to describing them as longitudinal, circular, and oblique layers, but practically, they all constitute one layer of muscle which is simply a network. As the bladder distends they stretch out and when it gets as full as it can comfortably hold, they contract together to empty it. The so-called internal sphincter in both male and female largely consists of a prolongation of some of the longitudinal fibers which cross over on either side of the urethra from front to back and from back to front. They are strong enough to maintain the bladder neck in apposition from front to back, thus constituting the so-called internal sphincter. In the male the prostate constitutes a firm, collar like mass surrounding the urethra, and the longitudinal fibers from below are attached into the upper surface of the prostate, whereas the fibers from above

are attached into the lower surface. In the female where there is no prostate these fibers simply cross over the urethra on either side and are attached into the muscular wall above and below the urethral opening. With them are circular fibers, slightly better developed at the internal urethral orifice than at other points, making a ring of muscle. From this point outward the circular muscle surrounding the urethra in the female continues and even sends fibers out into the vaginal wall supporting the urethra and compressing it upwards against the fibrous tissue between the bones making up the pubic arch. In the male, at the apex of the prostate there occurs an additional external sphincter consisting of circular fibers surrounding the urethra between the two sheets which make up the pelvic diaphragm. This external sphincter, just as the circular fibers surrounding the female urethra, constitutes a secondary compressor muscle. Actually the only fundamental difference between male and female urethras and their muscular control is that in the male the prostate is interposed between the internal and external sphincters.

So much for the closing mechanism which maintains a tonic shut off at the orifice of the urethra. The opening mechanism is very simple and is entirely separate. It consists of a flat, triangular layer of muscle lying inside of the floor of the bladder. It is anchored at each ureteral orifice and the fibers converge anteriorly to form a single muscle which is attached to the floor of the urethra. Voluntary contraction of this will pull open the internal sphincter thus bringing about micturition. When the internal sphincter is opened the urine passes into the urethra and the compressor urethrae circular muscles relax and allow it to come on out. Contraction of the detrusor muscle aided by abdominal muscles and even sometimes by pressure of the hands on the abdomen complete the act of emptying the bladder.

These facts explain why, wherever there is uncontrollable leakage, the real problem involved is to bring enough fibers of the bladder musculature across the urethra to make a tight joint just as normally there should be. Since any of them will act as a sphincter, this can practically always be done even though the whole floor of the urethra has been destroyed, so long as some muscular fibers from either side can be picked up, brought together, and made to heal in the midline. Even when this is impossible, a portion of the bladder floor can be utilized, pulled forward and sewed to the structures forming the roof of the urethra, thus making the same tight sphincter action at the internal orifice. In the male, if for any reason there is still incontinence, the levator ani muscles can be brought together in the midline in such a manner as to produce an upward thrust against the urethra, thus reinforcing the weak sphincter. In the female, this cannot be done; but a secondary operation can be done a year or so later, pulling in more muscular tissue from the sides of the bladder and in that case it will work. An important part of all such surgical procedures, however, is to do a suprapubic operation and divert the urinary stream so as to allow the plastic work to heal without interference.

SURGICAL APPLICATION

In the cases of urinary incontinence following perineal prostatectomy, one must bear in mind that the internal sphincter has long since been weakened down and atrophied. This being the case, the circular fibers at this point are of little use especially after enucleation of the prostate. Enucleation of the prostate perineally leaves an opening large enough for two fingers to be inserted through the bladder neck. While it is conceivable that such fibers might eventually contract down to form a sphincter, it will be very weak, and the patient must depend mostly upon the external sphincter which also is sometimes injured before or during the operation. Very large glands push against the external sphincter and weaken it prior to operation so that many of these old men have no sphincter action whatever and only retain urine in their bladder because of prostatic enlargement which acts as an automatic sphincter and in fact, eventually shuts them off. After operation, therefore, they might be said to have still little or no sphincter, and such as they have consists only of the external sphincter. Modern urologists are aware of this and bring the levator ani muscles together in the midline while closing the wound. This being the case, incontinence is not seen as often now as it once was. In those cases where this has not been done the Keyes' operation merely consists of making a transverse perineal incision, dissecting down to the levator ani muscles, freeing their edges and bringing them together in the midline under tension, thus elevating the entire perineum and compressing the urethra from below upward. It takes very little pressure

from below to reinforce the external sphincter and bring about the closure of the urethra. As mentioned in the beginning of this article, I have done this operation some four times and have been successful in each instance. The opening mechanism is provided by the trigonal muscle, and the patient is thus able to retain his urine and to empty it whenever the desire strikes him. In epispadias in males, exactly a similar condition applies. Their sphincter muscle has never been developed because of failure of the urethra to unite in front. The result is an atrophic fibrosed structure instead of an elastic muscle, and this structure has no contractile power either at the internal or external sphincter area. The only possible way, therefore, to produce continence in a patient of this type is to compress the floor of the urethra against the structures at the arch of the symphysis. In the cases reported in my previous article, I successfully did this by bringing the levator ani muscles together.

In the case of spinal meningocele wherein the child had never been continent, a different set of circumstances existed. He had an internal sphincter and an external sphincter and a prostate. The muscles were there but the nerve supply was poor, and he could not contract them. I was able to demonstrate the innervation of the levator ani muscles by testing the anal reflex; namely, I touched him with a pin on the edge of the anus, and he immediately contracted the levator on that side. I discovered that innervation was good on one side but not on the other. This being the cause, I made the perineal dissection and brought one levator entirely across the midline, sewing it to the fibrous tissues on the other side where the levator was atrophic.

Incontinence in the female brings up a slightly different application of the same principle. Here bringing the levator ani muscles together in the midline would have little or no effect upon the urethra because the vagina is interposed between the urethra and the levator. It should be remembered, however, that in our discussion of anatomy we mentioned circular fibers of the urethra which extend entirely around it at the bladder neck and gradually fan outward to include the whole vagina as the urethra comes forward. Some of them encircle the urethra all the way out, and certain fibers of them go completely out to the bones making up the pubic arch. They are quite well developed near the bladder neck. Here the objective consists of dissecting back on each side laterally far enough to get a good bite of muscle and bringing it together in the midline, thus forming a tight circular structure of muscle surrounding the urethra where it joins the bladder. This layer can be brought together as far anteriorly as any muscle fibers can be found to exist, reinforcing the compression of the urethra which occurs at the bladder neck. In the case wherein the urethra was split from meatus to the cervix, I dissected through the scar tissue, found the muscular structures on either side, and brought them together in the midline with three rows of chromic sutures.

Recently I had another case where the entire urethra and bladder neck had been destroyed. When the patient first came to me, there was some scarred tissue along the sides where the urethra had been and so far as I could see there was no possible chance to make a sphincter except to bring part of the bladder forward. The sloughing area had extended completely through the sphincter and really had involved a portion of the bladder floor. I made an attempt, however, and turned a cuff of mucosa forward making a tube of mucous membrane and then bringing the muscular layers together underneath this. I knew that this would not bring about enough sphincter action to be water tight but at least it made a start and gave me a short urethra which I thought later I might be able to prolong still further forward. It worked out exactly this way and two years later I saw the patient again, at which time there was a well developed collar of tissue which was thick enough for me to incise and turn another cuff forward bringing the urethral opening out just under the clitoris. Here I made a purse string in the mucosa and then dissected laterally either way until I found good bladder muscle and brought it together in the midline. The patient has remained dry from that time to this and is very happy over the result.

In the case of the sub-normal child where the urethra and bladder comprised one structure, I made an incision in the anterior vaginal wall, dissected back on either side and brought the muscles together in the midline so as to make an elastic sling to hold the urethra upward and to compress it. Such a sling could not be made of fibrous tissue because it would not remain closed. It must be muscular tissue and that was what I found and used. I am glad to say that in this case also the operation worked and the patient

was able to control her urine quite well when she left the hospital.

SUMMARY

In this article I have called attention to the fact that the muscles of the bladder and urethra have within themselves the inherent power of tonic contraction. This being the case, whenever any of them are destroyed or lost, all one has to do to restore continence is to find their neighbors and bring them forward in the proper position to make a tight muscular circle surrounding the opening through which the water comes. This is far better than using other muscles of voluntary type such as the gracilis or any of the leg muscles which would necessitate total readjustment of brain stimuli in order to control urination. Nature has been kind enough to provide a separate closing and opening mechanism in the bladder. The opening mechanism is the trigonal muscle and that is rarely ever injured enough to throw it out of function. The closing mechanism is the longitudinal fibers of the bladder musculature itself. In the male urethra we can use the levator ani muscles to supplement the absence of or weakness of, the internal sphincter muscles. This is an easy operation and is very successful. In the female urethra this cannot be done but the fibers making up the bladder neck and the floor of the bladder are thick enough so that with careful dissection they can be brought forward and will make a sphincter which is effective. The whole trick of technique is to bring them together tightly and do a suprapubic operation to divert the urinary stream until they heal. My experience has been quite happy in this regard.

PERICARDITIS SIMULATING CORONARY OCCLUSION*

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When an individual presents himself complaining of acute and severe pain in the chest it is desirable for obvious reasons to make a prompt and accurate diagnosis. If in addition to the pain a pericardial friction rub is present, the tendency to make a diagnosis of coronary occlusion is very great. Yet, every patient with this combination of symptoms does not have an occlusion of a coronary artery.

Acute infectious pericarditis of unknown etiology, a fairly well known though not very common syndrome, may be responsible for the clinical picture. Since it is so important to differentiate these two conditions from the standpoint of immediate and ultimate prognosis, two cases of acute pericarditis with features resembling coronary thrombosis will be reported and a brief discussion of the differential diagnosis will be made.

*Presented before the Medicine Section of the Oklahoma State Medical Association at the Annual Meeting, May 15, 1947.

Case No. 1. The patient, a 30-year-old car salesman who had previously been in good health, was admitted to the hospital on the morning of April 18, 1946. The evening before, while driving a car, he experienced pain beneath the sternum which at first was mild but soon became severe. This lasted several hours and finally subsided so that he was able to sleep.

The following morning the pain again appeared. On admission to the hospital he was complaining bitterly of pain beneath the sternum which was radiating into the neck and into the left shoulder. He was pale and of an ashen color and the skin was cold and moist. He was in obvious respiratory difficulty, having to sit up in order to breathe. The breathing was shallow and attempts to increase the depth of respirations markedly accentuated the pain. The pulse was 80 and the temperature 97°. The heart was not enlarged and the rhythm was regular. A very

loud pericardial friction rub could be heard over the entire precordium.

The urine was normal. There was no anemia and the white blood cells numbered 12,600 of which 70 per cent were neutrophiles and 30 per cent lymphocytes.

Morphine was required for relief and the following morning he could lie flat in bed, there was no pain and the friction rub had disappeared. That afternoon, however, he again had severe pain and the friction rub reappeared. During the next few days this sequence of events occurred on two more occasions. On the fourth and fifth hospital days the temperature was 100 degrees and 101 degrees respectively. With the exception of these two days the entire illness was afebrile. During the febrile period the sedimentation rate was 18 mms. in one hour and the blood culture was sterile. X-ray of the chest was negative.

Electrocardiograms on the second, fifth, and eighth days of the illness failed to show any significant changes.

He left the hospital on the ninth day, at which time there was no fever, no pain, and no friction rub. At no time was there any joint pain.

Case No. 2. Presented through the kindness of Minard F. Jacobs, M.D., Oklahoma City. The patient was a 42-year-old physician who had previously been in good health. For approximately four weeks before the onset of the present illness he had had an upper respiratory infection, including sinusitis, associated with moderately productive cough but no fever.

He was admitted to the hospital on November 6, 1946, complaining of pain in the chest. At about 9 o'clock on the previous evening the patient experienced mild substernal and epigastric discomfort which very gradually increased in intensity. He was able to go to sleep, however, but was awakened about 1 o'clock a.m., with very severe pain beneath the sternum and across the whole lower chest. The pain was accentuated by breathing, coughing, and twisting the trunk. He was also conscious of pain in the left shoulder. A loud pericardial friction rub was heard over the entire precordium.

The patient was removed to the hospital and considerable morphine and oxygen were required for relief of pain. The temperature was 100 degrees and for the next three days remained between 100 degrees and 101 degrees and thereafter was normal. The pain in the chest persisted for three days but was not severe after the first day. The friction rub was present for the first three days and was not heard thereafter. The white blood cells numbered 17,000 on admission and soon returned to a normal level. The sedimentation rates done at intervals were eight, 46, 14, 32, and 26 m.m. per hour.

The electrocardiogram done on the day after admission showed relatively normal standard leads and inversion of the T wave in lead CF 1. Six days later the limb leads still showed no significant changes but there was definite elevation of the S-T segments in leads CF two and three and inversion of T in CF one, two, three, and four.

The patient was discharged from the hospital 16 days after admission, free of symptoms. At no time did he have pain or swelling of the joints. He has had no recurrent symptoms. An electrocardiogram taken on January 8, 1947, was completely normal.

COMMENT

Although the ages of patients with both coronary thrombosis and acute infectious pericarditis vary rather widely, the average age of the latter both in the two cases reported here and of those reported in the literature is considerably lower.

In one of these patients the disease was preceded by a respiratory infection and this order of events has been reported in well over half of the patients in other series.[1]

The character of the pain is very important in differentiation. In both conditions there may be a number of hours in which the pain is not very severe or very constant but, as a general rule, once the pain of coronary thrombosis has become full blown it is unaffected by respiration, movement, or cough. In acute pericarditis, on the other hand, the pain is markedly increased by deep breathing, twisting the trunk, coughing, and sometimes by swallowing.

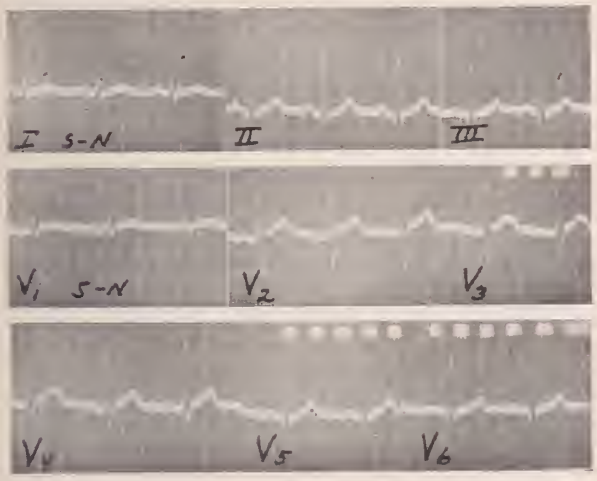
Often in acute infectious pericarditis the friction rub is heard on the first day and this is usual in coronary thrombosis, wherein it is much more likely to be heard on the fourth or fifth day or even later.[2]

Proper electrocardiographic interpretation is very important, on which at times the differentiation may largely depend. According to Noth and Barnes[3] the most characteristic change in acute pericarditis is elevation of the RS-T segment and exaggeration of the T wave in the standard leads. The most characteristic picture is elevation of the segments of all three limb leads. It may occur in only Leads I and II or II and III or in I only. They

further state that reciprocal depressions of RS-T 3 when RS-T 1 is elevated and depression of RS-T 1 when RS-T 3 is elevated are rarely observed and this serves to differentiate the condition from myocardial infarction.

In reality the electrocardiographic changes represent the difference in injury effect between the surface of the heart and the corresponding endocardial surface[4] and the precordial leads may be of greater significance than the standard leads. (Figure 1).

Below: 1-8-47 Fig. 1.



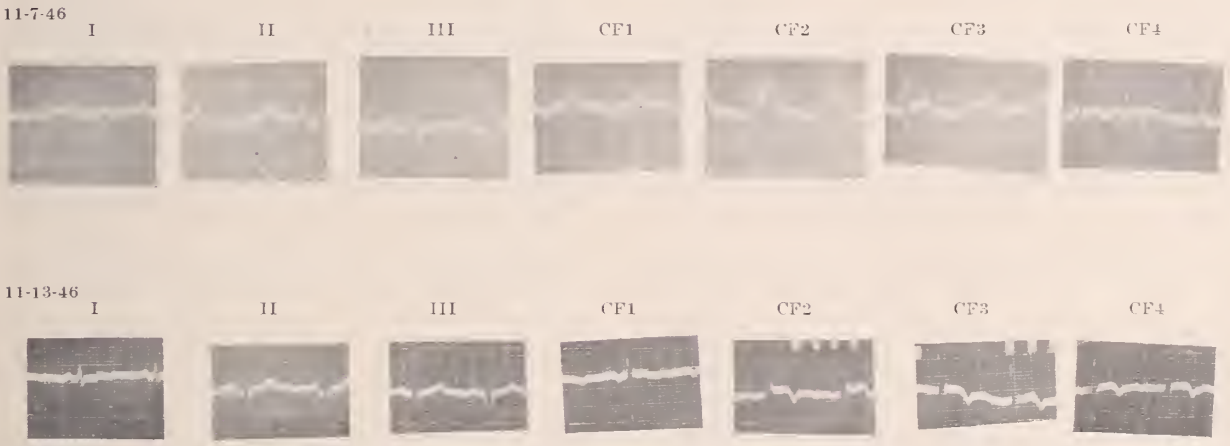
SUMMARY

Two cases of acute infectious pericarditis of unknown etiology are presented.

Certain features useful in differentiating acute pericarditis and coronary thrombosis are discussed.

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A.M.A. RECOGNITION OF THE GENERAL PRACTITIONER

A.M.A. reports that interest is growing like a gigantic snow ball in the newly established gold medal award which the A.M.A. board of trustees created recently for the general practitioner. Nominations for this award, which will be given for the first time at the A.M.A. supplemental session in Cleveland January 7, 1948, may be submitted to the headquarters office of the American Medical Association, Chicago, by any state medical association or any community service club such at Rotary, Kiwanis, or Lions clubs, by Chamber of Commerce, women's clubs, community councils or similar groups. Possibly there is a doctor in your community who is eligible to receive it. Nominations should include the name and address of the physician, his scholastic record and record of his medical service to his community.

Should any county societies have one of its members who it believes might qualify for this honor it is suggested that his name be forwarded to the Executive Office for consideration of the Council.

A new series of educational radio broadcasts, "Doctors Today," will be inaugurated by the American Medical Association in cooperation with the National Broacasting Company on Saturday afternoon, December 13, 1947, and will continue on succeeding Saturdays for 26 weeks. The exact time can be obtained from local NBC stations.

OPHTHALMOLOGICAL PROBLEMS IN GENERAL PRACTICE*

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The purpose of this discussion is to review a number of the more common problems in the care of the eyes, and to include responsibilities which lie within the scope of the general practitioner.

Conjunctivitis, or "pink eye" as it is frequently called, is by far the most common condition involving the eyes. It is usually infectious in origin, being due to a wide variety or organisms, most of them pus forming. The non-infectious types result from allergies, or from irritations by chemicals, trauma, burns, etc. The majority of cases of conjunctivitis are not serious and will heal spontaneously if given on treatment. The exceptions to this rule are the purulent types, gonococcus, pneumococcus, Koch's-Weeks bacillus, trachoma, and certain more rare types, such as epidemic kerato-conjunctivitis, all of which require some special treatment.

The important point in dealing with conjunctivitis is to determine that it is a conjunctival infection not complicated by something more serious. The salient symptoms of conjunctival infection are: tearing, scratching, and usually some itching, with redness of the conjunctiva greatest in the palpebral and cul-de-sac portions. There is always some discharge, more or less purulent in nature, and most evident upon arising in the morning, or after a period of rest or sleep. Serious cases of conjunctivitis will make themselves known by profuse purulent discharge, marked swelling of the conjunctiva and the lids, together with rapid development of all symptoms. Conjunctivitis is not often accompanied by headache, pain, or any great degree of photophobia, and the presence of these should lead one immediately to be on the look out for further trouble.

The treatment of conjunctival infections has been greatly simplified by the advent of chemotherapy. The large majority of cases of conjunctival infection will respond to local treatment with one or more of the sulfonamides. The eye is one place where sulfathiazole and sulfadiazine can be used with a minimum amount of danger, and with rather gratifying results. It is not even necessary to waste time carrying out smears or cultures in order to determine the causative organism, because the more severe types, such as gonococcus and pneumococcus, are susceptible to the effects of these drugs, Therefore, if you have satisfied yourself that you have a case of infectious conjunctivitis the treatment should be as follows: the usual instructions concerning contagious or communicable diseases should be given the patient, particularly the instructions regarding the use of individual wash basins, towels, etc. The eyes should be cleansed thoroughly with boric acid or saline solution every three hours, or more often, depending upon the amount of the discharge. This cleansing should be done with pledgets of cotton soaked in the solution, not with an eye cup, and followed by instillation of a small amount of the five per cent ointment of either sulfathiazole or sulfadiazine. The eyes should not be bandaged, because the bandages will have a tendency to delay healing by retarding the discharge. Under this treatment the condition should show definite improvement within 24 hours, and will generally heal within three to five days. Application of the ointment should be continued for a period of one or two days beyond the apparent time of healing to prevent relapse. If there is no improvement in the condition within 48 hours the treatment should be discontinued, and measures used which are not within the scope of this discussion. Penicillin is, of course, very effective in the treatment of certain types of infection. However, its use has not been recommended here because of the difficulty and uncertainty of obtaining fresh and potent solutions and ointments, and because of the fact that the incidence of skin reactions has been rather frequent following local application in the eye.

*Presented before the General Session of the Oklahoma State Medical Association at the Annual Meeting, May 15, 1947.

Foreign bodies constitute a second large group of eye problems which come to the family physician, and which may in a great many cases be managed by him. Ocular foreign bodies fall into two great classes, extra-ocular and intra-ocular. The second does not concern us here, with the exception of diagnosis which is simple and extremely important. I say simple, because the patient makes his own diagnosis of intra-ocular foreign body in most cases. He does this by the realization that he has been struck in the eye with considerable force, and that the vision is impaired. The general practitioner's responsibility in cases of intra-ocular foreign body may be summed up by saying that my own cases have resulted from close proximity to hammering with metal on metal or some similar operation, in which great force was being used. Whenever there is history of such an injury, no matter how trivial or painless it may seem, a careful fundoscopic search should be made, in combination with X-ray examination for radiopaque foreign body. This examination must be made in a matter of hours rather than days, since delay may sacrifice the eye. Extra-ocular foreign bodies may be free in the conjunctivea, adherent to the cornea, or adherent to the conjunctiva. In any case they usually cause much discomfort in the form of painful scratching, accompanied by tearing and redness of the eye, not unlike many cases of acute conjunctivitis, although usually without the discharge found in the latter. The favorite conjunctival sites for foreign bodies are in the inferior cul-de-sac and beneath the upper lid. These are generally easily removed by irrigation or with a small swab of sterile cotton wrapped around the end of an applicator or a toothpick.

Foreign bodies which have become adherent to, or imbedded in, the cornea require special care, but, even so, many of them can be successfully removed if a few definite rules are followed with a reasonable amount of care. The first rule is that the eye should be anesthetized with either two per cent Butyn or one-half per cent Pontocain solution, instilled two or three times at two minute intervals. The second is that the instrument to be used in removing the foreign body should be sterile so that insult is not added to injury. Third, a light should be used which has its rays brought to something near parallel focus, so that the object can be readily located, and not only the foreign body, but also, all resulting stain can be removed. Removal of imbedded foreign bodies is best accomplished with a small, semi-sharp spud made for that purpose. In the absence of this instrument a bistory point or even the point of a hypodermic needle may be used effectively. This surgical procedure requires the services of an assistant to hold the lids apart and to focus the light. The operator should use a binocular loupe or a magnifier in order that he may clearly see the foreign body and accurately determine the depth to which it has penetrated the cornea, conjunctiva or sclera. One must remember that the average thickness of the coats of the eye is about one millimeter, and that the manipulation of any object which has penetrated more than half this depth is hazardous because of the possibility of penetration into the globe with marked increase in chances of infection.

When removing foreign bodies which tend to stain, such as emery particles or steel, it is essential that all tissues including the stain should be curretted away because of an increased tendency to form ulcers. Further, when dealing with the cornea, it must be remembered that this tissue has no blood supply, and the least amount of trauma is desirable, including great care to preserve the epithelial layer as much as possible. This layer regenerates rapidly, but whenever it is destroyed the stroma is open to infection, and the possibility of infection is in direct proportion to the area exposed.

It is my opinion that every eye which has had a break in the corneal epithelium should be covered with a pad until such break has been repaired by nature. In order to assist in preventing infection I always instill a small amount of five per cent ointment of sulfathiazole before applying the pad. Jnjuries which involve the conjunctiva or sclera, so long as the globe is not penetrated, will not require the use of a pad unless extensive laceration is present.

If there has been a penetration of the globe, or an intra-ocular foreign body is suspected, the patient should be referred to someone experienced in that type of treatment without delay. It is well to keep in mind that penetrating injuries are emergencies, and a few hours delay may mean the difference between saving or losing the eye.

Uveitis, or inflammation of the uveal tract in any or all of its parts, is of interest to the general practitioner from a diagnostic standpoint only. The common type is iritis, which is in reality an inflammatory reaction

of the iris and ciliary body of systemic origin, and may usually be easily diagnosed by these signs. The first is photophobia, or sensitivity to light, often accompanied by rather severe pain or aching when the eye is exposed to the sun or other bright light. Second, the eye is nearly always sensitive to pressure over the ciliary body a few millimeters out from the corneal limbus. The visible indications are injection of the vessels immediately surrounding the cornea, in contradistinction to injection of conjunctivitis which is greatest near the cul-de-sac. The injection of iritis involves the smaller and deeper vessels, is generally more diffuse, and has a violet tinge which is characteristic. Iritis may be manifest by any degree of injection, from a mild so-called ciliary blush, to a deep and extensive redness, not unlike conjunctivitis, with the exception that its deepest color is near the limbus. It must also be remembered that severe conjunctivitis is sometimes accompanied by varying degrees of iridocyclitis. In marked degrees of iritis the pupil of the involved eye is considerably smaller than the pupil of the fellow eye. Iritis, too, must always be differentiated from acute glaucoma.

Glaucoma, or hypertension of the eye, is the greatest destroyer of vision, and it is the duty of all physicians, to be on constant guard in order to recognize signs of this disease early, just as we are on the constant alert for first signs of malignancy. In this discussion we may divide glaucoma into two groups, chronic glaucoma and acute glaucoma; the first of which is more common and much more difficult to recognize before irreparable damage has been done.

Simple glaucoma does not cause any pain, in fact, it often does not result in any symptoms of which the victim is aware until much damage is done, and a large part of the field of vision is lost due to optic atrophy. We should never pass lightly over such signs as transient halos about lights, vague headaches, discomfort about the eyes, or transient blurring of vision, especially in persons past 40 years of age. One should learn to observe and recognize the normal depth of the anterior chamber, and any decrease in the depth from normal should indicate an examination to eliminate the possibility of glaucoma. By far the most common lead to the diagnosis of glaucoma by the general practitioner should be the opthalmoscope. With this instrument he should be able to recognize whether or not there is a normal disc, with its funnel-like cup, or whether there is a flat disc, and certainly he should be sufficiently familiar with the opthalmoscope to recognize the cup that appears in simple glaucoma before there is sufficient atrophy to make that disc white. Once chronic glaucoma is suspected or diagnosed, it should be the responsibility of the physician to see that the patient reports for complete diagnosis and treatment.

Acute glaucoma is much more dramatic in its onset and course, and, therefore, much more easily diagnosed. It usually begins with more or less blurring of vision, which may come and go several times within a few days or a few weeks before the actual attack is recognized. This followed by marked blurring of vision, acute pain or headache on the side of the affected eye.It usually progresses in a matter of several hours with moderate ciliary injection, not unlike that in iritis, combined with clouding of the cornea, and a moderately dilated and fixed pupil, in contrast to the small active pupil or iritis. The pain of acute glaucoma is severe, often requiring opiates for relief, and frequently accompanied by nausea and vomiting. The eyeball will feel hard to the touch of the fingers when compared to the normal eye. Acute glaucoma, as the name implies, is an emergency condition and should receive attention for its relief in a matter of hours. Opiates may be given for the relief of pain when necessary, but this relief certainly should not be an excuse for delaying transfer of the patient for treatment since the eye may be lost because of a few hours delay.

The actual treatment of glaucoma is purely symptomatic, since we do not know the etiology of the disease and we as ophthalmologists are not always successful in bringing about or maintaining controls any more than vascular hypertension is always controlled successfully. We can, however, help most of these patients, some to a very great extent, if treatment is begun early. The most ideal method of prevention would be frequent examination of the eyes just as you recommend frequent physical examinations to uncover other physical defects. Every person beyond the age of 40 should have his eyes examined at least once in two years.

This discussion certainly should cover the problem of squint, or crossed eyes, in an effort to correct a few erroneous impressions which are shared by the laity, some general physicians and even a few ophthalmologists.

Marked degrees of squint can be readily diagnosed by the patient's mother or neigh-

bors and needs no elaboration. Moderate degrees of squint may pass un-noticed until the child reaches school age, and the teacher brings them to the attention of the parents. Many small degrees of squint are not apparent by simple inspection and can only be diagnosed by special methods in experienced hands. It therefore behooves us to be always on the alert for any small deviation of the eyes and to see that they are examined. Any tendency on the part of a child to persisently hold his head to one side is a very definite indication that the eyes should receive attention. Squint is in reality a very crippling condition for the child because it may cost him the development of proper vision in the squinting eye, and more important, it is a constant source of embarrassment often resulting in personality changes which may never be entirely overcome.

To add to the difficulty of bringing these patients in for diagnosis and treatment there is still a widespread superstition among the laity that any treatment of squint, especially surgical treatment, is likely to result in loss of vision. As a matter of fact, this condition is one of the safest and most satisfactory problems with which the ophthalmologist deals, provided it is undertaken before the visual habits are too well fixed, that is, before the patient reaches the age of five or six years. Treatment of squint should be started as soon as the defect appears unless it is present at birth or within the first year of life, then it should come under observation at the time it is first noticed. Effective treatment can often be used at one year of age, and by the time the child is two years of age it may be possible to perform surgical procedures if they are found to be necessary. Measures to assist in development of vision of the squinting eye certainly should be undertaken before the age of two years unless there are physical or mental defects which would constitute a contraindication. Our plea, then, is for a chance at early diagnosis of every case of squint, and to this end it is proper that all children should have a thorough eye examination before reaching school age regardless of any evidence of squint or other disease.

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CLINICAL PATHOLOGIC CONFERENCE

University of Oklahoma School of Medicine

Presented by the Departments of Pathology and Medicine

BELA HALPERT, M.D., AND ROBERT C. LOWE, M.D.

OKLAHOMA CITY, OKLAHOMA

DR. HALPERT: The patient, whose story we are presenting today, was admitted to the hospital in the terminal stage of a fatal disease. The course of this disease with its clinical signs and symptoms has been recognized since the time of Morgagni. However, the cause still remains unknown. Today we have Dr. Lowe from the Department of Medicine to present and analyze the clinical story.

PROTOCOL

Patient: R.C.B., white male, age 66, admitted May 1, 1947; died May 4, 1947.

Chief Complaint: Fatigue, dyspnea, jaundice, pains in the left upper quadrant, and swelling of the legs and abdomen.

Present Illness: Up to six months previously, the patient had been perfectly well. At that time he first noticed some shortness of breath on exertion and some weakness. He became tired easily. His wife first noticed that the sclerae were tinged yellow at this time. A few weeks later dependent edema of the feet and ankles was first observed. There was no pain, no digestive disturbance, and no change in the stools. The patient continued working up to five weeks before admission. At this time the edema had ascended to the legs and the abdomen had become markedly swollen. The combination of these disturbances forced the patient to bed. At this time he noted some pain in the epigastric region, some belching, and considerable general malaise. There was no vomiting. The urine became dark and scant. The patient gradually became more stuporous until the time of admission; shortly before this he became disoriented. Two days before admission a productive cough and fever developed.

Past History: In 1926 the patient's left lower extremity was fractured at the hip by a falling rock in a coal mine. It healed and became five cm. shorter when it healed. Family history and work history were notable for the lack of any contributory data.

Physical Examination: Revealed the patient to be disoriented and stuporous. He appeared acutely ill. There were reddish nodules over the face and reddish striae of the skin of the abdomen and legs. There was moderate jaundice of the skin and sclerae, with four plus edema of both lower extremities and distention of the abdomen. The pupils were constricted, and there was an alternating strabismus. The heart was normal. Blood pressure was 130/80. The abdominal distention appeared to be due to gas and free fluid. The liver was ballotable about three fingers below the right costal margin. The spleen was questionably palpable. The abdominal wall was edematous and there was marked edema of the scrotum and genitalia.

Laboratory Data: The urine was dark amber with specific gravity of 1.024, pH 5.5, no albumin, no glucose, and two plus bile. Microscopic examination revealed two to three R.B.C.'s per high power field, and one to two W.B.C.'s per high power field, two to four coarse granular casts and occasional hyaline casts. A second urine study the next day revealed two plus albumin, with no other significant change. The red blood cell count was 4,450,000 with 14 Gm. of hemoglobin. The white blood cell count was 29,800 with neutrophiles 83 per cent, lymphocytes 14 per cent, monocytes three per cent. Urea nitrogen was 21.7 mgm. per cent; CO_2 combining power was 33 volumes per cent. Van den Bergh reaction was direct positive four mgm. Total protein was six Gm. per cent with A/G ratio of 2.65/3.35. Prothrombin time was 118 per cent. A Mazzini test of the blood was negative.

Clinical Course: Wangensteen suction was instituted and 1000 cc. of five per cent dextrose was given intravenously. Catheterization obtained 485 cc. of urine. The patient was restless, moaning and trying to get out of bed. Twenty-four hours later he was hic-

coughing. Crude liver extract and hykinone were started intramuscularly. Dextrose infusions were continued. It was necessary to restrain the patient almost constantly. There was little, if any, response to treatment. By the third day the urinary output was reduced to a few cc. of dark red urine. The patient died on the third day following admission.

CLINICAL DIAGNOSIS

DR. LOWE: There are many causes of stupor and delirium, but when a patient in such a state is very active and difficult to restrain, and when there is evidence of hepatic dysfunction in the form of jaundice, enlargement of the liver, ascites, and disturbances in the manufacture of plasma proteins, we must consider the possibility that we are dealing with a patient in the final stage of a hepatic disease. The internist is not as familiar with hepatic failure as is the surgeon. As a matter of fact textbooks of internal medicine deal very little with this picture. This is in contrast to the surgical literature in which there are many references to the fact that surgical procedures, in a patient already defective in liver function, may precipitate a final, fatal hepatic failure. The internist sees hepatic failure in cases of so-called acute yellow atrophy. This is a relatively infrequent disease and this patient's history and course do not suggest acute yellow atrophy. One point strongly against this is the fact that symptoms and signs, including jaundice, began six months prior to admission to the hospital. Edema of the feet and ankles was a prominent feature at this time and must certainly receive consideration. The swelling of the abdomen strongly suggests ascites. Three explanations for this edema come to mind: (1) congestive heart failure, (2) renal failure (nephritis), (3) a combination of hypoproteinemia and increased portal venous pressure. This last explanation seems to be the more likely one since this patient did not present other signs or symptoms to support a diagnosis of either cardiac or renal disease. If we dismiss these first two causes then the edema is additional evidence in support of hepatic disease. There was no digestive disturbance, and no change in the stools.

In spite of his early symptoms the patient continued working until the edema and ascites became so severe that he had to take to his bed. At this time he began having some pain in the epigastric region, some belching, and considerable feeling of ill health. We have no history of alcoholism or other factors that would indicate malnutrition as the cause of hepatic disturbance, nor is there any suggestion of poisoning, medicinal or otherwise, that might account for subacute yellow atrophy. The picture, as we see it, suggests cirrhosis of the liver. There are some discrepancies which are not accounted for however. An acute episode of hepatic failure, such as this man presents, is not the usual terminal event in portal cirrhosis. It is possible that some special event precipitated this sudden failure. The urinalysis is of little help. There are variable degrees of albumin, casts, red blood cells, and white blood cells recorded. The findings in the peripheral blood, marked leukocytosis with a high neutrophile count, are not what one would expect in a patient who is not dehydrated, or has no evidence of acute infection, nor would acute yellow atrophy or cirrhosis account for this. It is quite possible then that something else has been superimposed to precipitate an hepatic failure in connection with a liver already damaged.

The terminal picture suggests *pulmonary infection* as the immediate cause of death. *Cirrhosis of the liver,* or a comparable chronic disease of the liver in which hepatic failure is precipitated as a result of some other factor usually ends in this way, or is the result of hemorrhage from esophageal varices. My final impression is that the patient had cirrhosis of the liver, or a comparable condition, in which terminal hepatic failure was precipitated by some other factor. What that factor was I do not know.

CLINICAL DISCUSSION

QUESTION: Why wouldn't Weil's disease be considered in a case such as this?

DR. LOWE: Weil's disease is not such a chronic disease as we have seen in this patient. It usually terminates in acute hepatic failure with hemorrhagic phenomena, or in uremia. The jaundice may actually disappear following the hepatitis, and the patient usually dies of uremia within six weeks, instead of six months as this patient did.

DR. HOPPS: Dr. Lowe, will you please list the clinical signs and symptoms of hepatic failure, other than jaundice.

DR. LOWE: Actually, signs and symptoms are quite comparable and in both conditions include: anorexia, fatigability, nausea and vomiting, mental hebetude, and stupor ending in coma.

There are, however, certain qualitative variations. Quite consistently the early symptoms of uremia are hardly recognized until

this condition has been present for some time. There is usually a decrease in mental alertness ultimately leading to stupor going into coma. This may be preceded by a longer or shorter period of headache and gastrointestinal symptoms. In hepatic failure there is a general feeling of ill health with fatigability. The patient will tell you that he doesn't feel up to par, whatever par may be. Ultimately, changes in the mental state occur: stupor, delirium, and ordinarily this terminates in coma. One important point of difference here is that the patient with hepatic failure is usually quite restless and constantly moving about. The actual coma is usually preceded by a period of agitation and insomnia. In uremia one frequently observes respiration similar to that of diabetic coma (acidosis).

ANATOMIC DIAGNOSIS

DR. HALPERT: Necropsy findings corroborated Dr. Lowe's impressions from analysis of the clinical data. In addition, we did find that which Dr. Lowe needed to explain the leukocytosis. The external examination revealed essentially those changes which have been described under the physical examination. The skin and sclerae presented a definite yellow tinge, but this was not marked. There was generalized edema most marked over the lower extremities and scrotum. There was considerable fluid present also in cavities: 2500 cc. in the peritoneal cavity, a total of 850 cc. in the pleural cavities and 100 cc. in the pericardial cavity. This was clear straw-colored serous fluid. The principal findings were, to be sure, in the liver. This organ was markedly decreased in size and weighed but 850 Gms. in contrast to the usual weight of approximately 1500 Gms. The spleen was markedly enlarged, weighing 800 Gms. so that it was about the same size as the liver. These two organs are mentioned together because of the interrelationship which they bear to each other in this disease. The decrease in size of the liver in Laennec's cirrhosis is some indication of the degree of portal hypertension which may be expected to coexist. The splenomegaly results from and thus reflects this portal hypertension. The liver presented a rather typical appearance in that its surface was largely composed of numerous smooth, firm, rounded nodules from 0.2 to 0.5 cm. in diameter. Such a picture is the basis for one synonym for this disease, hobnail liver. Cut surfaces of the liver presented an essentially similar appearance. The consistency and color of the spleen were characteristic of chronic passive congestion. Other evidence for portal hypertension was seen in the distended esophageal veins, esophageal varicosities. As you know, in Laennec's cirrhosis, the circulation of blood through the liver is altered so that a major effect, and the basis for many signs and symptoms, is portal hypertension. In addition to a simple mechanical factor, the capillaries of the hepatic artery communicate with those of the portal vein so that the venous pressure is considerably increased. The hemorrhoidal veins dilate and blood passes through them from the portal circulation into the inferior vena cava. Dilatation of veins of the stomach, anastomosing with veins of the azygos system allow the blood to pass into the superior vena cava. The veins of Retzius provide dorsal, and the veins about the round ligament and umbilicus provide ventral communication with the inferior and superior vena cava. Rupture of a dilated esophageal vein may cause severe hemorrhage and is often the precipitating cause of death.

The heart weighed 385 Gm. The right lung weighed 550 Gm. and the left 500 Gm. The increased weight of the lungs was the result of edema and, in addition, bronchopneumonia.

The final anatomic diagnosis is:

Cirrhosis of liver, portal with chronic passive congestion of viscera and anasarca including ascites, hydrothorax, bilateral, and hydropericardium

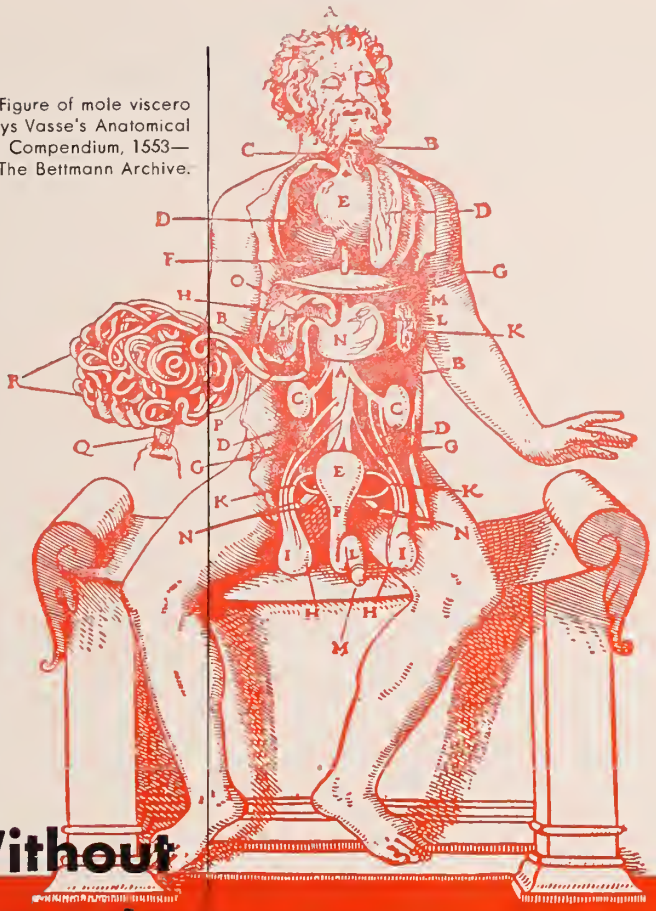
Bronchopneumonia, bilateral, with pulmonary edema

Prostatitis, acute
Abscess in kidney, left
Cholelithiasis (pure calcium bilirubinate stone)

Luschka ducts in gallbladder wall.

DO YOU KNOW?

That during October Oklahoma Blue Cross celebrated the achievement of reaching 200,000 members, and Oklahoma Physicians Service celebrated reaching 50,000 members, which means that both plans will move into a new category in the national picture.



Anatomy: Figure of mole viscero from Loys Vasse's Anatomical Compendium, 1553— Courtesy, The Bettmann Archive.

Without accurate knowledge...

of human anatomy and physiology, without stethoscope or electrocardiograph, it is small wonder that physicians of the 16th Century were helpless before many of the conditions for which present day medicine possesses efficient treatment.

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President's Page

Dr. George Cross, President of the University of Oklahoma is to be commended for his aggressive attitude in tackling the problems of the Medical School. Those of us who have had the privilege of discussing these problems with him know that he is as anxious to develop the Medical School as any member of the Medical profession.

The selection of Dr. Mark Everett, Ph.D. to serve as acting Dean brings to that position a man who knows the problems of the school from first hand knowledge and a popularity with both the pre-clinical and clinical staff that will bring about whole hearted cooperation from both groups.

The creation of Assistant Deans to handle specialized problems of the school is a definite step forward and will leave the Dean with a greater portion of his time for planning for the school's future.

I am personally of the opinion that the Medical School has now entered a stage of development in which we will all be proud to have a part. May I suggest that everyone put his shoulder to the wheel, give the Medical School and its new administrative staff a pat on the back, and a pledge of full cooperation.

Paul B Lamplin.

President.



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Special Article

THE NEED OF TEAM WORK IN THE CONTROL OF TUBERCULOSIS

Public Relations Director, Oklahoma County Health Association

GEORGIA M. BOWEN

There is a significance and a poignant appeal, not caught at first glance, in the 1947 Christmas Seal, shown on the cover of this month's Journal of the Oklahoma State Medical Association. The yoke of oxen pulling together, patiently and ploddingly, is significant of the fine cooperation in the long haul of the nation's physicians and their societies, on a national, state and local level, and National Tuberculosis Association with its 3,000 affiliates, constituting a liaison between the lay and the professional world of health — a cooperation credited with a 75 per cent reduction in tuberculosis death rates in less than half a century.

The poignancy of the appeal, however, may be found in the recently released figures of the State Department of Health which point an upswing in tuberculosis death rates in Oklahoma, reversing the happy status of the past decade which was marked by an almost phenomenal decline.

Oklahoma had 578 TB deaths during the first eight months of 1947, as compared with 472 deaths in the same period last year, a 22 per cent increase. One hundred and six more persons dead from a disease authoritatively dubbed "unnecessary."

Hospital standards call for two and one-half to three beds for every TB death. Oklahoma has less than half this number, and is especially remiss in provision of sanatorium beds for tuberculous Negroes, despite the known fact that this race is many time more succeptible to the disease, that it keeps the TB rates up, and by the same token, is a virulent spreader of the disease among all peoples.

Augmenting the inadequacy of sanatoria facilities in Oklahoma is the fact that not a single general hospital in Oklahoma has a tuberculosis ward or knowingly admits a tuberculous patient. At the same time, despite four or five years of plain reason-why propaganda since the advent of the photoflurographic equipment, only one hospital in this state, University hospital group in Oklahoma City, gives chest x-ray examinations as a part of the routine admission technique. Yet every medical man and every well-read layman knows that hidden tuberculosis in general hospitals constitutes an occupational hazard for nurses, internes, attendants, and all coming in close contact with the patient harboring the tubercle bacilli.

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60



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GENERAL NEWS

IOWAN NAMED NEW DIRECTOR OF MENTAL HEALTH FOR STATE



Charles F. Obermann, M.D., has assumed his duties as Director of Mental Health of the State of Oklahoma with offices in the State Capitol Building, Oklahoma City.

Dr. Obermann came to Oklahoma from Iowa where he served as superintendent of the Cherokee State hospital from 1936 until he accepted the Oklahoma position. He received his B.A. in 1926 from the University of Iowa and was awarded his M.D. in 1930 from the same university. In 1936 he received his M.S. from the University of Iowa and served his internship at University Hospital, Iowa City, Iowa, in 1930-31. He was certified by the American Board of Psychiatry and Neurology in 1942.

His experience includes: student intern, department of neurology, University Hospital, Iowa City, Iowa, 1928-30; intern, University Hospitals, Iowa City, Iowa; departments of neurology and pathology (six months in each department) 1930-31; resident and clinical assistant, department of neurology, University Hospitals, Iowa City, Iowa, 1931-33; assistant physician, Clarinda State Hospital, Clarinda, Iowa, 1933-35; assistant superintendent, Hospital for Epileptics and School for Feebleminded, Woodward, Iowa, 1935; assistant physician, Cherokee State Hospital and superintendent of the Cherokee Hospital.

Organizations Dr. Obermann is a member of are the Iowa Cherokee county medical society (president in 1941 and 1942); American Psychiatric Association; Sioux Valley Medical Association; American Association for Advancement of Science; Iowa State and American Hospital Association, member board of trustees Iowa Hospital Association since 1943; president Iowa Hospital Association 1946; Iowa Society for Mental Hygiene; Iowa State Board of Eugenics, Iowa State Board of Alienists for Examination of Criminally Insane.

SECRETARIES-EDITORS, VA MEETINGS ATTENDED IN CHICAGO

The Oklahoma State Medical Association had two representatives at the Conference of State Medical Association Secretaries and Editors in Chicago November 7 and S. Dick Graham represented the OSMA and Clayton Fondren represented the Journal.

The day before the secretary editor conference, another conference was held on the Veterans Administration Home Town Medical Care Program and Leroy Sadler, M.D., Oklahoma City, and Dick Graham attended this meeting.

Report of VA Meeting

Veterans Administration speakers from Washington pointed out that there are 42 programs in existence and four more states, including Oklahoma, will have the program soon.

Principal speaker was the Veterans Administratiou chief medical director, Paul R. Hawley, M.D., who explained that home town medical care cost the VA three times as much per case as care in a Veterans Administration hospital or clinic does. The appropriation from the Veterans Administration for 1948 is $7 million. In Michigan, Dr. Hawley pointed out, a total of 50,000 veterans received some type of care in this program, which ran in excess of $1,000,000 the first year. Under the Michigan home town medical care program, approximately 7,000 veterans per month are receiving examinations or treatment.

Secretary-Editors Conference

The secretaries-editors conference included panel discussions on the progress of prepayment medical care plans, public relations, federal and state legislation, rural medicine, planning and conducting state medical conventions, state medical journal clinic and others.

Principal speakers included representatives from the state medical associations and the American Medical Association.

STATE DOCTORS, SECRETARY ATTEND SOUTHERN CONFERENCE

More than 125 medical society representatives from seven southern states attended the two-day conference in New Orleans, sponsored by the Council on Medical Service of the A.M.A. in cooperation with the Council on Industrial Health and the Committee on Rural Medicine Service.

Among the Oklahoma representatives were: Finis W. Ewing, M.D., Muskogee; Phil Risser, M.D., Blackwell; W. Jackson Sayles, M.D., Miami; James Stevenson, M.D., Tullsa; J. Hutchins White, M.D., Muskogee; and J. S. Chalmers, M.D., Sand Springs, and Dick Graham.

Dr. Stevenson appeared on the round-table of "Prepayment Medical and Surgical Care Plan Problems."

Dick Graham, Oklahoma State Medical Association Executive Secretary, participated in the panel discussion on state medical public relations.

Although it was the 14th conference sponsored by the council in the last three years, it was the first to be held in the New Orleans area and medical societies from Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee and Texas participated.

EVERETT NAMED TEMPORARY DEAN OF MEDICAL SCHOOL

The appointment of Dr. Mark R. Everett, professor of biochemistry, as temporary dean of the University of Oklahoma School of Medicine is the first of several projected changes designed to improve conditions of the school. Dr. Everett became a member of the medical school faculty in 1924. He was professor of biochemistry and pharmacology until 1935 at which time the departments were separated and he remained as chairman of the biochemistry department.

Dr. Harold A. Shoemaker has resigned from the position of assistant dean, a post he has held since 1939. He will continue as professor of pharmacology.

Early this fall Dr. George Cross, President of the University of Oklahoma, called together representatives of the Oklahoma State Medical Association and the Medical School alumni and discussed the advisability of a group of physicians being appointed by him to serve in an advisory capacity on matters pertaining to the Medical School. From the meeting came a unanimous endorsement of Dr. Cross' suggestion and subsequently two representatives from the Oklahoma State Medical Association, Medical School, Oklahoma Medical Research Foundation, Clinical Faculty, Pre-Clinical Faculty, and student body were appointed by Dr. Cross to serve on this committee. Representatives from the two faculty groups and the student body were elected by their respective groups.

Composing the committee are the following: George H. Garrison, M.D., Rufus Q. Goodwin, M.D., Clinical Faculty; Arthur A. Hellbaum, M.D., E. Lachman, M.D., Pre-Clinical Faculty; J. W. Finch, M.D., Evans E. Tally, M.D., Oklahoma University Medical School Alumni; W. Floyd Keller, M.D., John H. Lamb, M.D., Oklahoma Medical Research Foundation; Paul B. Champlin, M.D., James Stevenson, M.D., Oklahoma State Medical Association; and Charles Martin and Ralph Ownby, student body.

To increase the efficiency of administration of the medical school Dr. Cross has divided certain responsibilities among three associate deans. While these positions are new to the Oklahoma Medical School, they have been used successfully in many other schools for several years. Arthur A. Hellbaum, M.D., professor of pharmacology, has been named associate dean of graduate studies and research and will serve as acting dean during absence of the dean. Homer F. Marsh, M.D., professor of bacteriology, has been named associate dean of students, and Henry H. Turner, M.D., associate professor of medicine has been named associate dean of faculty. These associate deans will be responsible for administrative matters in the respective fields indicated by their titles, in addition to continuing their department duties.

At a faculty meeting November 20, 1947, Dean Everett asked for nominations to the Dean's Advisory Board. Such a board has been used to advantage by several previous deans. This group offers advice on general policy and major problems. Its tenure corresponds to that of the dean.

The University Hospitals Executive Board continues with the addition of Wann Langston, M.D., professor of medicine, and Dean Everett, chairman ex officio. Other members of the board are Mr. Paul H. Fesler, vice-chairman and secretary ex officio, and Drs. Robert H. Bayley, Cyril E. Clymer, James B. Eskridge, Clark H. Hall, Theodore G. Wails and Willis K. West. This group is at present occupied with the filling of the vacancies resulting from recent resignations in the nursing school, and the problem of personnel shortages.

The above mentioned groups and the general faculty are considering the problems peculiar to their respective departments and the problems of the school in general. Following careful study of several long-standing difficulties changes will be effected to promote more efficient function. Admission of students, hospital departments, full-time faculty members, the nursing school, and the hospital bed problem will all receive early attention.

Changes made will all be directed toward the general improvement of the medical school both as to function and academic standing.

ATTENDANCE TOTAL WAS 471 FOR CANCER SYMPOSIA

A total of 471 doctors of medicine and dentists registered for the October cancer symposia including doctors from Oklahoma City, Enid, Woodward, Clinton, and Duncan for the west side and Tulsa, Muskogee, McAlester, Durant and Ada for the east side.

On the cards filled out by those attending 192 indicated "yes" on additional cancer symposia and a two day cancer symposium in Oklahoma City next spring. Twenty-eight checked "yes" on additional cancer symposia without an indication on symposia in Oklahoma City, while 19 indicated "yes" on additional cancer symposia and "no" for cancer symposia in Oklahoma City next spring. Two indicated "no" on additional cancer symposia and "yes" on cancer symposium in Oklahoma City next spring. Approximately seven did not make any indication or made no indication for additional symposia but "yes" to cancer symposia in Oklahoma City next spring.

Plans at the present time are in the preliminary stage for another symposium to be held in the spring because of the large number of requests received for more instruction.

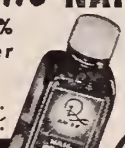
Lt. Col. A. H. Bungardt (Med '39), Resident in Orthopedic Surgery at University Hospital, is also Professor of Military Science and Tactics at the Medical School.

James F. Hohl, M.D., Stroud, has accepted a position with the student health service at the University of Oklahoma. Dr. Hohl came to Stroud in June of 1946 and was associated with Carl Bailey, M.D. during that time.

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25 YEARS AGO IN THE JOURNAL

(from Editorial Notes — Personal and General)

Dr. A. C. Lucas, Castle, and Miss Grace Phillpots were married in Okemah November 20th.

Dr. W. H. McBrayer, Idabel, was painfully injured when his car skidded into a ditch near Hugo. Dr. McBrayer was transporting a patient to the hospital when the accident occurred.

Dr. A. S. Risser, Blackwell, read a paper on "Appendicitis" at the meeting of the Tri-County Medical Society, when physicians of Cowley and Sumner Counties, Kansas, and Kay County, Oklahoma, met at Wellington, Kansas, November 16th.

Dr. John R. Walker, Enid, was recently elected president of the Kiwanis Club of that city.

Drs. C. M. Bloss and Robert Keyes, Okemah, have purchased a site and begun the erection of a hospital building.

"Officers were elected earlier in the year but as this is the first 25 years ago column we will list 1922-1923 officers of the Oklahoma State Medical Association:" president, Dr. McLain Rogers, Clinton; president-elect, Dr. Ralph V. Smith, Daniel Bldg., Tulsa; first vice-president, E. S. Ferguson, Oklahoma City; second vice president, W. A. Tolleson, Eufaula; third vice-president, E. B. Dunlap, Lawton; secretary-treasurer-editor, Dr. Claude Thompson, 508 Barnes Bldg., Muskogee.

FOURTEEN OKLAHOMANS NAMED TO COLLEGE OF SURGEONS

The following named Oklahoma doctors were among the 810 surgeons inducted into the College at the twelfth assembly and convocation of the United States chapter, International College of Surgeons, held in Chicago in October:

Fellows: Robert B. Gibson, M.D., Ponca City; Ray Harvey Lindsey, M.D., Pauls Valley; Darius W. Darwin, M.D., Woodward; Earl Duwain McBride, M.D., Oklahoma City; Patrick S. Nagle, M.D., Oklahoma City; Howard Louis Puckett, M.D., Stillwater; Leo Joseph Starry, M.D., Oklahoma City; John Powers Wolff, M.D., Oklahoma City; William A. Hyde, M.D., Durant; Raymond G. Jacobs, M.D., Enid; John Harrison Robinson, M.D., Oklahoma City; and

Associates: John G. Matt, M.D., Tulsa; August M. Brewer, M.D., Oklahoma City; and Weldon K. Haynie, M.D., Durant.

ANNOUNCEMENTS

INDUSTRIAL HEALTH MEETING TO BE HELD AT CLEVELAND

The Council on Industrial Health will hold its eighth annual congress on industrial health in the Cleveland auditorium, Cleveland, Ohio, January 5 and 6, 1948. These dates immediately precede the interim session of the American Medical Association, which will be held in the auditorium January 7 and 8.

The program of the Congress is being constructed with general practitioners in mind and will include discussions of first aid and emergency services in industry, physical examinations, administrative practices, applied physiology, aviation medicine, radiation medicine and practical expositions of occupational disease management, traumatic surgery and rehabilitation.

RADIOLOGICAL SOCIETY HOLDS CONFERENCE

Lucien M. Pascucci, M.D., of St. John's Hospital, Tulsa, was elected to membership when a meeting of the Oklahoma State Radiological Society was held October 27 at the Skirvin hotel, Oklahoma City.

The scientific program consisted of presenting a radiological conference based on cases seen at University Hospitals during the past month. The cases were presented by H. Bender, M.D., H. Sehested, M.D., G. Emery, M.D., and P. E. Russo, M.D.

OTOLARYNGOLOGY-OPHTHALMOLOGY SEMINAR SET FOR FLORIDA

This year the University of Florida midwinter seminar in otolaryngology and ophthalmology will be held at the Flamingo hotel, Miami Beach, January 12 through 17. The lectures in otolaryngology will be presented on the 12th, 13th, and 14th, and those in ophthlmology on the 15th, 16th, and 17th. The Pan-American Congress of Ophthamology will be held in Havana, Cuba, January 5-10, 1948, making it possible for ophthalmologists to attend both meetings in one trip.

AYCOCK AND SANGER RECEIVE FELLOWSHIPS

Two Oklahomans were selected to receive fellowships this fall at Chicago at the meeting of the American Academy of Ophthalmology and Otolaryngology.

Byron W. Aycock, M.D., Lawton, received his fellowship for his specialization in ear, nose and throat and W. W. Sanger, M.D., Oklahoma City, received his fellowship as an ophthalmologist.

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MEDICAL ABSTRACTS

THE PLASTIC SURGICAL CLOSURE OF DECUBITUS ULCERS IN PATIENT WITH PARAPLEGIA. Herbert Conway, Cornelius J. Kraisal, Robert H. Clifford, Jerome Gelb, Julius M. Joseph, and Leo L. Leveridge, New York, New York. Surgery, Gynecology and Obstetrics, 85:3:321-332, (September) 1947.

This excellent article is well worth reading in that it gives the results of handling one of surgery's most vexing problems.

The problem of the decubitus ulcer is always difficult, but when it occurs in a patient with paraplegia it becomes a catastrophe.

The authors have meticulously set down plans, tried and discarded; likewise, it brings out the meticulous care both pre-operatively and post-operatively that is necessary to effect a cure.

The illustrations and photographs are well done and portray the results better than written descriptions.

The following is the summary and conclusions made by the authors:

Report is made of experience with the excision and plastic surgical closure of 56 decubiti in paraplegic patients in a veteran's hospital. The locations of decubitus ulcers studied, their etiology, pathology, and bacteriology are discussed.

Five methods of operation have been used; elliptic excision and closure; excision and closure by Z-plasty; excision and closure by pedicled flap; excision and closure by pedicled flap with free graft at a distance; closure by free thick-split graft of skin. Forty, or 71 per cent, of the 56 cases were healed by these procedures.

All of the ulcers in this series were of long duration. They had been present for an average of 12 months in 40 cases in which plastic surgical closure was successful. The ulcers had averaged 15 months in duration in 16 cases (29 per cent) in which plastic surgical closure was not successful. In the management of this group of patients emphasis has been placed upon the application of the established principles of plastic surgery to the closure of the decubiti. Experience has indicated that methods in which the scar of suture resides directly over the site of the former decubitus are apt to be unsuccessful. Elliptic excision was used only in the case of ulcers in patients whose general condition would not permit major operative procedure. Evidence in this report indicates that large ulcers are closed successfully in the highest percentage of cases when a flap of skin and subcutaneous tissue is rotated from an adjacent area and the defect at the site of procurement of the flap is surfaced by a free graft of skin.—John F. Burton, M.D.

MEDICAL SCHOOL

CALENDAR — DECEMBER, 1947

SURGICAL PATHOLOGIC CONFERENCES — Each Tuesday 11:00 A.M. to 12:00 Noon.

MEDICAL CONFERENCES — Each Wednesday 9:00 A.M. to 10:00 A.M.

CLINICAL PATHOLOGICAL CONFERENCES — Each Thursday 11:00 A.M. to 12:00 Noon.

TUMOR CLINICS AND CONFERENCES — First and Third Tuesdays (December 2 and 16) 8:00 A.M. to 9:00 A.M.

UROLOGICAL-PATHOLOGIC CONFERENCE—Second Tuesday (December 9) 8:00 A.M. to 9:00 A.M.

ORTHOPEDIC PATHOLOGICAL CONFERENCE — Last Tuesday (December 30) 8:00 A.M. to 9:00 A.M.

MONTHLY STAFF MEETING — Second Friday (December 12) Dinner, 6:15 P.M.

RADIOLOGIC CONFERENCE — Fourth Monday (December 22) 6:45 P.M. to 7:30 P.M.

Lt. John Blender (Med '45) has recently been assigned to the laboratory of D. B. McMullen, M.D., in Japan. Dr. McMullen is on leave from the faculty of the University of Oklahoma School of Medicine.

Henry J. Freede, M.D., (Med '42) has been appointed house surgeon on the staff of the Robert Jones and Agnes Hunt Orthopedic Hospital in Oswestry, Shropshire, England. He left the middle of November to take up his duties. This residency was obtained on the basis of an exchange fellowship.

OBITUARIES

Ralph D. Robinson, M.D.
1909-1947

Ralph D. Robinson, M.D., formerly of Frederick and Ardmore, died October 24 in a Topeka, Kansas hospital.

A former staff surgeon at the Frederick Clinic Hospital, Dr. Robinson had been living in Silver City, New Mexico, for some time where he was serving as contract surgeon to the United States army. Dr. Robinson was in Topeka to make application for release from the army and planned to enter private practice at Mount Vernon, Ill. where his mother resides.

Survivors include the widow and a son and daughter, Ralph D. Robinson, Jr., and Maryann Robinson.

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Surgery
CARL HOTZ, M.D.

Urology
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KARL F. SWANSON, M.D.

Eye, Ear, Nose and Throat
D. L. MISHLER, M.D.

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HAVE YOU HEARD?

Henry Turner, M.D., Oklahoma City, participated December 12 and 13 in the A.C.P. graduate course in medicine of the University of Texas held at Galveston December 1 to 13.

J. R. Hinshaw, M.D., recently of McAlester and now of Norman says that his son, *J. Raymond Hinshaw, M.D.*, O. U. Medical School, 1946, and Rhodes scholar, writes from Oxford that he has a splendid tutor and is enjoying his scientific research and study there very much. He finds experimental anatomy especially interesting. Among other honors he received while in school he was president of his class during his junior and senior years. He was winner of the Oklahoma Hall of Fame scholarship award as the outstanding student in the school of medicine, was president of Phi Eta Sigma, freshman scholarship fraternity, received the Pe-et sophomore scholarship cup, was high ranking junior Phi Beta Kappa and was given several other high awards at the university.

Avery B. Wright, M.D., announces the opening of offices at 612 Bass Building, Enid, Oklahoma, for the practice of medicine and general surgery.

Cleve Beller, M.D., resident physician at the University Hospital spoke at the dedication of the new $10 million research laboratory at Brookhaven, New York. The new laboratory is under the control of the atomic commission, but is administered by a number of universities. Dr. Beller was chief of the radiological safety division of the Los Alamos atomic research laboratories during the war and also did special work at Oak Ridge.

F. W. Taylor, M.D., has recently moved to Duncan from Oklahoma City and is now on the staff of the Weedn hospital and has opened private offices in Duncan.

V. C. Tisdal, M.D., Elk City, was elected one of the directors of the Kiwanis club of Elk City for the coming year.

W. F. Keller, M.D., Oklahoma City, recently addressed a joint meeting of the Garfield County Medical society and the Garfield County Bar association at a meeting in Enid. Dr. Keller discussed the needs of a law requiring services of a medical man to determine the cause of death when the death is from undetermined or unknown cases.

O. L. Parsons, M.D., Lawton, used Algeria as his principal topic when he spoke to members of the Lawton Lioness club on his travels while in the navy. He showed slides of the country and its inhabitants as illustrations.

Twin brothers, *R. E. Dillman, M.D.*, and *T. E. Dillman, M.D.*, Ponca City, are to serve together in a marine hospital at Tsingtao, China, on the Yellow Sea. Both graduated from high school together and went on to the University of Oklahoma Medical school together and have been serving together in hospitals at Bremerton and Seattle, Wash. for the past 19 months.

Floyd Bartheld, M.D., was re-elected president of the staff of St. Mary's Hospital, McAlester. *E. H. Shuller, M.D.*, is vice-president, and *W. H. Kaeiser, M.D.*, was also re-elected as secretary.

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KEY TO ABBREVIATIONS

(S)—Scientific Article
(E)—Editorial
(SP)—Special Article
(A)—Association Activities
(An)—Announcement
(BR)—Book Review
(Abs)—Abstract
(O)—Obituary
(Pic)—Picture
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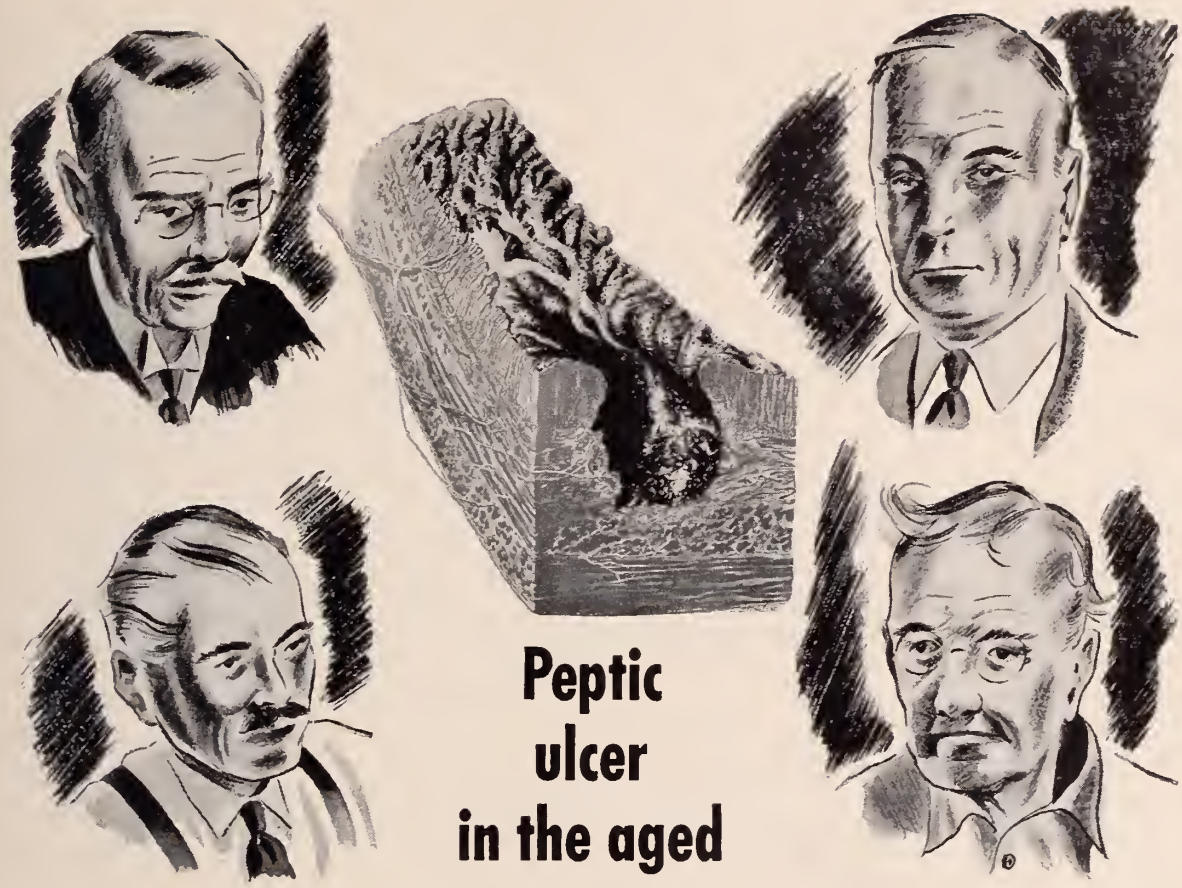
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Two Oklahoma physicians recently participated in special short courses on infantile paralysis. *C. A. Traverse, M.D.*, Alva, attended the session in New York City and *Mark D. Holcomb, M.D.*, Enid, attended a similar conference at Stanford University.

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HAVE YOU HEARD?
(Continued from Page 504)

F. C. Lattimore, M.D., and *John R. Taylor, M.D.*, both of Kingfisher, attended postgraduate courses during October. Dr. Lattimore took a one week postgraduate course on the physiological basis of internal medicine at the University of Pennsylvania under the auspices of the American College of Physicians. Dr. Taylor's postgraduate course was in internal medicine at the University of Wisconsin.

C. S. Stotts, M.D., is a new member of the Kiwanis club of Pawhuska. He was presented as a new member by *Glen McDonald, M.D.*

Floyd E. Bates, M.D., who has been dividing his practice between Ardmore and Ringling for several months, has moved to Ringling to establish a full time practice there.

J. E. Levick, M.D., has recently moved from Elk City to Oklahoma City where he is practicing psychiatry and the treatment of nervous and mental ailments. Dr. Levick's address is 211 N.W. 12th, Oklahoma City. He was in the army 38 months and resumed his practice in Elk City after being discharged. Dr. Levick expects to get his board certification within a year.

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Earl I. Mulmed (Med '37) is now located in Tulsa, Okla., at the Braniff Building.

Paul T. Powell, M.D., Ponca City, discussed social hygiene before members of the air Scout squadron at Ponca City as guest speaker at a meeting this fall.

NEW MEMBER ACCEPTED IN CREEK COUNTY SOCIETY

Louis A. Martin, M.D., Sapulpa, was recently accepted for membership in the Creek County Medical Society at a meeting held at the Cowart-Sisler hospital, Bristow. P. K. Lewis, M.D., vice-president, presided and other members present included J. F. Curry, M.D., Sapulpa; W. P. Longmire, M.D., Sapulpa; J. E. Hollis, M.D., Bristow; O. C. Coppedge M.D., Bristow; Frank H. Sisler, Jr., M.D., Bristow; Frank H. Sisler, Sr., M.D., Bristow; and O. H. Cowart, M.D., Bristow.

OKLAHOMANS IN MEDICAL CORPS CONVENE AT BOLLING FIELD

When a course on the medical aspects of the atomic bomb was held at the army medical center, Walter Reed General Hospital, Washington, D. C., early this fall there were eight in the class from Oklahoma so an "Oklahoma party" was held at the Bolling Field officers club, writes Major Richard J. Brightwell, Hq. USAF, Washington, D. C.

Others present were Lt. Col. James H. Hammond, Bolling Field Command, Washington, D. C.; Lt. Col. Charles L. Gilbert, War College, Washington, D. C.; Lt. Col. Francis S. Crane, Fort Ord, Calif.; Col. Gordon G. Pugh, USAF, Washington, D. C.; Lt. Col. Clinton S. Maupin, Fort Worden Washington, D. C.; Col. William H. Arnspacher, Office of the Surgeon General, Washington, D. C.; and Lt. Col. Lloyd W. Taylor, Walter Reed General Hospital, Washington, D. C.

TULAREMIA PRECAUTION GIVEN

The Illinois Medical Journal has offered a piece of advice for hunters. Besides the usual guns, shells, boots and heavy clothing, rabbit hunters are urged to add another item of equipment before taking a turn at bagging their limit — rubber gloves. This advice is contained in an article on tularemia because the tiny organism that causes the disease is so small that authorities believe it can enter the human body through the pores of the skin when handling diseased animals.

GORGAS MEDAL AWARDED TO MAJ. GEN. HAWLEY

At the meeting in Boston, November 15 of the Association of Military Surgeons the Gorgas Medal, sponsored by Wyeth Inc., was awarded to Maj. Gen. Paul Ramsey Hawley, Chief Medical Director of the Veterans Administration, for his outstanding achievement in reorganizing and directing the Administration's medical division.

Awarded annually for outstanding achievement in the field of medicine in the armed forces, the medal commemorates the memory of Surgeon Gen. William Crawford Gorgas, whose work in preventive medicine made possible the construction of the Panama Canal, and carries with it an honorarium of $500 from Wyeth.

Removal of VA physicians and nurses from Civil Service control and the establishment of a policy under which personnel, research services, and training of the large medical centers of the country have been available to the government hospitals are two of the greatest accomplishments under Gen. Hawley's administration.

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*Frazer, J. G.: The Golden Bough, vol. 1, New York, Macmillan & Co., 1923



It is ironical that the practice of attempting to cure rickets by holding the child in the cleft of an ash tree was associated with the rising of the sun, the light of which we now know is in itself one of Nature's specifics.

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